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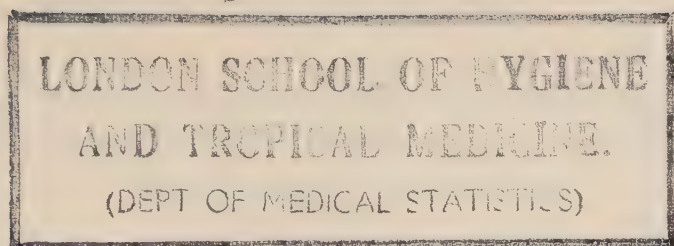
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CONTENTS.

VOL. XXXII.—YEAR 1869.

March, 1869.

	PAGE
Statistical Notes regarding the Colony of Natal. By DR. MANN, F.R.G.S., F.R.A.S., Superintendent of Education, and Special Commissioner of the Natal Government.....	1—28
On the Rise, Progress, and Future Prospects of Tea Cultivation in British India. By CHARLES HENRY FIELDER, Esq., Secretary to the Lower and Northern Assam Tea Companies, and Honorary Secretary to the Indian Tea Planters' Association	29—37
On the Cost and Organisation of the Civil Service. By HORACE MANN, Esq., Barrister-at-Law, of Lincoln's Inn, Registrar of the Civil Service Commission	38—60
On the Agricultural Statistics of the United Kingdom (Second Paper). By JAMES CAIRD, Esq.	61—77
Miscellanea :—General Results of the Commercial and Financial History of 1868.—General Election, 1868.—Cost of Lancashire Voters per Head.—The Harvest Yield of 1868.—Poor Men's Wives.—The Agricultural Labourer.—The Budget of the City of Paris.—The Reserves of the National Banks of the United States	78—124
Quarterly Returns, October, November, December, 1868.....	125—151

June, 1869.

PAGE

Report of the Council, presented at the Thirty-Fifth Anniversary Meeting of the Statistical Society, held 15th March, 1869; with the Proceedings of that Meeting	153—158
On Insanity and Crime; and on the Plea of Insanity in Criminal Cases. By WILLIAM A. GUY, M.B., F.R.S., Fellow of the Royal College of Physicians, Professor of Forensic Medicine, King's College, London, Physician to King's College Hospital, and one of the Vice-Presidents of the Statistical Society	159—191
On the Statistics of the Kingdom of the Netherlands. By SAMUEL BROWN, F.S.S., President of the Institute of Actuaries	192—214
Miscellanea:—Mineral Statistics of the United Kingdom.—Local Taxation in England and Wales.—Annual Science Examinations, 1868-69.—Statistics of Life Assurance Offices.—The House of Lords in 1869.—Agriculture in France.—Church Schools in England and Wales, 1867.—The Statistics of the London Bankers' Clearing House for Two Complete Years, May, 1867, to May, 1869.—The Railways of America.....	215—233
Quarterly Returns, January, February, March, 1869	234—257

September, 1869.

Opening Address of the President of Section F (Economic Science and Statistics), of the British Association for the Advancement of Science, at the Thirty-Ninth Meeting, at Exeter, August, 1869. By the RIGHT HONOURABLE SIR STAFFORD NORTHCOTE, BART., C.B., D.C.L., M.P.	259—270
On the Classification of the People by Occupations; and on Other Subjects connected with Population Statistics of England. By T. A. WELTON, ESQ.	271—287

On the Decline of Shipbuilding on the Thames. By JOHN GLOVER, Esq.	288—292
On the Economic Progress of New Zealand. By ARCHIBALD HAMILTON, Esq.	293—307
The Pressure of Taxation on Real Property. By FREDERICK PURDY, Esq., Principal of the Statistical Department, Poor Law Board, and one of the Honorary Secretaries of the Statistical Society	308—324
Miscellanea:—On the Method of Teaching Physical Science in Schools.—Reduction in Weight of Gold Coin.—Railway Casualties in 1868.—Emigration, 1868, and Previous Years.—The English and the French Post Offices	325—338
Quarterly Returns, April, May, June, 1869	339—358

December, 1869.

Inaugural Address on the Progress and Present Condition of Statistical Inquiry, delivered at the Society's Rooms, 12, St. James's Square, London, on Tuesday, 16th November, 1869. By the PRESIDENT, WILLIAM NEWMARCH, F.R.S.	359—390
Report on the Seventh International Statistical Congress, held at the Hague, 6th—11th September, 1869. By SAMUEL BROWN, Esq., President of the Institute of Actuaries	391—410
On the House Accommodation of England and Wales, with Reference to the Census of 1871. By ROBERT HARRY INGLIS PALGRAVE, Esq.	411—427
The Cotton Trade of the United Kingdom, during the Seven Years, 1862-68, as compared with the Seven Years, 1855-61; with Remarks on the Return of Factories existing in 1868. By ELIJAH HELM	428—437

Miscellanea:—Statistical Notes on some Experiments in Agriculture.—The Changes in Agriculture in Cornwall since 1800.—The Depreciation of Gold, 1847-69.—New Zealand Census, December, 1867.—Medical Students.—Movement for International Economy of Military Expenditure.—Matriculation and Honour Lists, 1832-68.—The Tyne: Progress of Shipping Entries, 1854-68.—Management of Towns in the United States.—Australasian Gold.—Opium in China	438—463
Quarterly Returns, July, August, September, 1869	464—483
INDEX to vol. xxxii (1869)	485—503

JOURNAL OF THE STATISTICAL SOCIETY,

MARCH, 1869.

STATISTICAL NOTES *regarding the COLONY OF NATAL.* By DR. MANN,
F.R.G.S., F.R.A.S., *Superintendent of Education, and Special
Commissioner of the Natal Government.*

[Read before the Statistical Society, 15th December, 1868.]

EIGHTY years back, the South African land, that now basks in the light of the British countenance as the colony of Natal, was a naturally luxuriant tract of wild country, hanging between the moist sea breezes of the Indian Ocean and the parched interior plains of the great continent; practically unknown to the civilised nations of Europe, but, at the same time, certainly filled with a numerous population of black skin, who were distributed into patriarchal clans, subservient each to its own particular head man, or chief. There were at that period not less than ninety independent tribes of the Kafir variety of man, spread over the eleven thousand square miles of land that now constitutes the colony. They were essentially a gentle people, certainly too densely packed to be able to indulge nomadic propensities, and living chiefly by rude cultivation of the ground, and pasturing cattle, sheep, and goats on the wild herbage. They dwelt in low hemispherical huts of grass, which were about the highest efforts of their constructive skill. They were almost without clothes, excepting strips of skins, which were more matters of adornment than service. They had a singularly small repertory of domestic utensils and implements. Their weapons were bucklers of ox hide, knobbed sticks, and iron-tipped lances. They troubled themselves as little as possible with the chase, and preferred to sit in the sunshine, and count their goats and cows, and see their women scrape such holes in the ground as the millet seed could not dispense with, than to do any other thing, if it ever crossed their perception that there was aught else that could be done in such a world of sunshine.

Now, in making what most probably is the first allusion to the statistics of this particular region that has come before the Statistical Society of London, it may be worth while to start from the

actual beginning, and inquire what were the statistical capabilities of these aboriginal savages basking in their sunshine or sheltering from the wind and rain in their extemporised beehives, what were their powers of dealing numerically with the events and circumstances of their condition. Well, this much, at least, is clear concerning them. Every noble savage that sat in the sunshine had five fingers on each hand, the most natural and convenient of all tablets, and whenever he had occasion to count he could hold up one of these fingers after the other and call it by its proper name, thus:—

<i>Nye</i>	was	one.
<i>Bili</i>	„	two.
<i>Tatu</i>	„	three.
<i>Ne</i>	„	four.
<i>Thlanu</i>	„	five.

Then, having finished off one cluster of counters, and there being a second of exactly the same character available, nothing was more natural than to proceed with the other hand. Thus:—

“Tat’ isi tupa,” which means literally “Take the thumb,” of course that is “the thumb of the other hand,” became SIX.

“Kombile”—that is, the forefinger (also of the second hand)—became SEVEN.

“Shiyangalobili”—that is, “You must leave two,” of course *two fingers of the second hand*—became EIGHT.

“Shiyangalulunye,”—that is, “you must leave one,” of course *one finger of the second hand*—became NINE.

“Shumi” was ten, and meant the polishing off of the entire number of available counters, by holding up the little finger of the second hand.

Any thing beyond this, as there were no more natural digits to fall back upon, became merged at once with the sand grains of the sea shore, the stars of the sky, and the leaves of the forest or pasture. It was simply “a great number.” Most of the Kafirs now begin to enumerate larger quantities by compounding these simple indications of number. But this is almost certainly an importation into the original and intrinsic simplicity of the affair, made with paulo-post-future tenses and optative and potential moods for the verbs, by the missionary teachers.

Now it may possibly be worth a passing reflection, in connection with this illustration, whether there is not here some ground for the conclusion that the fingers of the human hand were primarily sticks, or beads, of the natural human abacus, and put to their proper use by these dusky “originals” of the South African soil. If so, the refinement of civilisation, which has turned them into implements and instruments of work, may, after all, have been more convenient

than correct; and these noble savages may be right in the very strong instinct they still manifest not to degrade a "counting organ" into a tool of toilsome labour. Certainly the Natal Kafir still infinitely prefers to "take the thumb," and "to leave two fingers," than to meddle with the inconvenient handle of either the plough or spade.

It will not be matter for surprise, in the face of this statement of the aboriginal and intrinsic statistical qualification, that literally nothing is known of the actual numbers of the human race which were dwelling on this South African soil in these early days. Indeed it is only possible to learn any thing at all of these really curious and interesting aboriginal people, by cross-questioning living men, and ascertaining what they remember to have heard their fathers or their grandfathers say. The period which goes back beyond this very brief depth of reliable and investigable tradition is an absolute blank. There are no records of any kind that can be drawn upon. The pre-historic man inquirers have here a remarkable and original, if not fertile, field for their investigation. They may certainly deal here with "pre-historic men" who are juniors to their own grandfathers.

The only way in which it has been possible to arrive at the fact that there were some ninety small independent tribes living in the territory which is now Natal, is, that the names of these tribes and of their chiefs have been recovered from the half-clouded memories of living natives. Having got the names, it is of course *now* possible to count the number without "taking the thumb and leaving two fingers," and halting at the vast and mystic "shumi," which fades into infinity with the tip of the last left finger. That the ranks of these ninety tribes were however, well filled, looms out from the fact, also averred by living men, that at this time there was only one small tract of the country now included within the Natal boundaries, namely, a narrow spot lying immediately under the Drakenberg frontier, and between the sources of the Umzimkulu and Bushmans' rivers, which was devoid of population.

To pass now at once from the traditional into the historic period of this colony. The historical period of Natal dates properly from the year 1823, and therefore still covers an interval of time that is five years within half a century. In the year 1823, the hem of European influence for the first time fairly touched the land. In that year a naval officer, who had been engaged in surveying duties along this part of the African coast, conceived the idea of planting a party of European traders where the fine natural inlet of water that has since become the Port of Natal, is found. This officer, Lieutenant Farewell, at once entered into negotiation with the dominant chief of the district for a small suitable site of land, and

managed, through various vicissitudes of fortune, which cannot be touched upon on this occasion, finally to establish white feet and commercial proceedings upon the seaboard.

It is necessary, however, for statistical purposes, to relate that when Lieutenant Farewell introduced the foot of civilised commerce to this region, matters had changed greatly among the aboriginal inhabitants from the patriarchal and barbaro-flourishing state that has been alluded to; a military despotism had sprung up under the genius of one man, and the ninety peaceable tribes had been either bowed to the yoke or scattered to the four winds of the South African heaven. The Zulu-Kafir race had gradually become a name of terror and power that absorbed or overshadowed the older distribution of the naturally indolent people. The military frontier of this dominant but upstart tribe was a little advanced into what is now the territory of Natal when Lieutenant Farewell entered upon his negotiations; but the rest of the land was almost desolate. A few wretched fugitives lurked in concealment in natural fastnesses and impenetrable thickets, dragging out a precarious and wretched existence, and in some instances even driven to cannibal practices, which were altogether unknown to their earlier traditions. The luxuriant gardens were desolate, and the flocks and herds swept away by the frequent raids of the northern conquerors. The year after Lieutenant Farewell's landing it was a very rare thing indeed to find more than two natives together, and it was almost impossible to get at the lurking places of the scared fugitives. From this time, however, the White Coast Settlement became the rallying point towards which the fugitive natives gradually directed their steps. On the year following that on which the Statistical Society of London was founded, namely, in 1835, there were 1,000 adult men, capable of bearing arms, gathered round the small knot of white-skinned adventurers at the new port, and the settlement was formally organised into a township, which thenceforth became "Port Natal," or more properly the Port of Durban, its name being conferred in compliment to Sir Benjamin D'Urban, the British governor at the Cape. This, therefore, must be looked upon as the first nucleus of the colony of Natal, and the colony may be so held to have a social age approximately the same with the existence of the Statistical Society.

Soon after the settlement of the township of Durban, discontented Dutchmen from the old colony caught scent of the milk and honey of the new land, and came flocking down with cattle and families into its upland districts from the northern mountain frontier. This led at first to collisions and disputes with the British authorities at the Cape, who began to think the land was worth looking after, when they found others so anxious for its possession.

These all issued in the entire tract of land comprised between the Drakenberg Mountains and the sea, and between the Tugela and Umzimkulu rivers, which with one trifling exception are still the boundaries of the dependency, being formally and finally annexed under British rule, and settled as the colony of Natal.

Natal, thus constituted, with an addition of territory recently made as a new county to the south of the River Umzimkulu, comprises eleven millions of acres, or approaching to seventeen thousand square miles of land.

The exact quantity of land comprised in the several industrial divisions of the colony, exclusive of certain reserves of commonages set apart for new townships, is :—

	Acres.
Pietermaritzburg and Upper Umkomanzi divisions	3,192,631
Klip River and Newcastle divisions	2,290,095
Weenen division	1,267,585
Victoria Inanda and Tugela divisions	556,866
Umvoti division	909,713
Durban and Alexandra divisions	1,109,529
Alfred county division.....	1,000,000
Total	<u>10,326,419</u>

Of this land 4,459,797 acres had, at the commencement of the present year (1868), been granted or sold to white proprietors ; 75,315 acres of the quantity being to missionaries for native use.

1,312,235 acres have been reserved, under trust, for the exclusive use of the natives, and 4,554,387 still remain in the hands of the Crown, available for disposal.

In connection with this subject of the appropriation and occupation of the land, it is worth while to remark what strange revolutions have occurred, even within the few brief years in which Natal has been a colony, in the view that has been held as to the amount of land that is requisite for each occupier. The first grants were made in favour of the old Dutch pioneers, who, indeed, had for the most part taken up the land for themselves before the British Government had itself assumed any proprietary right in the colonial soil. These men received 6,000 acres apiece for their homesteads. But shortly after the first settlement of the colony, in the year 1843, they formally urged upon the Lieutenant-Governor that it was altogether impossible for a man to provide for his family upon 6,000 acres of land, and in many instances additional grants of 2,000 acres were added to the original holdings upon this plea.

In the year 1847 a systematic and organised attempt was made to introduce a large number of English settlers direct from the

British Isles, under the inducement of giving free grants of land. An association was formed in England, which arranged with the Colonial Government to take up 50 acres of Crown land for every 10*l.* deposited and every adult settler sent out. Of the 50 acres 20 only were given to the settlers, and 30 acres were retained by the promoters for their own share of the bargain. An extra 25 acres was finally added to the settler's allotment by the Government. But even then there remained the curious fact, that 45 acres of land was deemed sufficient for an Englishman within twelve or thirteen years of the time when 8,000 acres of land was deemed barely sufficient for a Dutchman.

At the present time the grants of Crown lands vary from 50 acres, with a good tract of surrounding commonage, to 200 acres, with 400 acres of reserve for easy purchase.

It is not an easy thing to give an exact and reliable statement of the value of land in colonies circumstanced like Natal. Within the last three or four years it was estimated above the warrant of circumstances. Since the commercial crisis it has gone down very much; but the price still varies considerably with position. The upset price of Crown land is 4*s.* an acre, and at the present time land may be purchased in all but the most desirable positions at this rate. Coast land, suitable for planting sugar and coffee sells at from 1*l.* to 5*l.* an acre. Corporation suburban land belonging to the city of Maritzburg sells for 7*l.* 10*s.* per acre. It has been no uncommon thing, within the last four or five years, for 3,000-acre farms, within twenty or thirty miles of the city, and either without or with only rude buildings, to sell for 1,000*l.*

It has been stated that, in the year 1835, the native population of Natal barely exceeded 1,000 adult males. The white members of the coast settlement at that time numbered about 16.

In the year 1840 the white population of Natal amounted to about 6,000 individuals; but these were almost entirely Dutch Boers, recently introduced from beyond the mountains. In 1840, the black population was estimated at between 20,000 and 30,000.

Soon after the annexation of the territory as a British colony, two-thirds of these Dutch people left, and the white population was again reduced to a very low ebb.

At the end of the year 1858 the population was estimated at:—

White people	9,000
Black ,,	130,000

Within the subsequent ten years the white numbers have nearly doubled. The increase of the population within that period is broadly expressed in the following statement:—

Population of Natal.

	White.		Kafirs.		Indian Coolies.	Total.
	Males.	Females.	Males.	Females.		
1861	6,664	5,874	65,324	75,041	—	152,903
'63	7,829	6,161	72,694	83,367	1,184	171,235
'65	9,003	7,366	83,055	92,165	5,570	197,159
'66	9,154	7,519	78,063	77,285	{ including }	172,021
'67	9,194	7,769	78,043	92,812	{ Coolies }	187,818
					„	

It will be understood that the increase in the number of the black population is largely due to the gradual influx of refugees from neighbouring barbarous districts and to the introduction of Indian Coolie labourers for the service of the planters.

The estimate of the black population can only be looked upon as approximate. The natives are constitutionally averse to being numbered, which somehow they take to imply increased taxation or service. The estimate is made by counting the huts for taxing, and then allowing four individuals to each hut as the probable distribution of inmates.

An approach to the number of the European population which has been introduced from without, is given in the following table of immigrants introduced by public aid :—

Previously to 1858, under the system of small land grants		2,500	individuals.
In	'58	106½	statute adults.
„	'59	121½	„
„	'60	153½	„
„	'61	304	„
„	'62	402½	„
„	'63	256	„
„	'64	113½	„
„	'65	92	„
„	'66	69	„
„	'67-68	400	„
General total		4,518	„

This, however, of course, does not represent the entire number introduced into the community from without, as there are constantly stray accessions arriving in the colony, independent of all action from the Government.

At the end of last year there were thus approximately 17,000 white-skinned Europeans, 175,000 dark-skinned Africans, and 5,000 Asiatics within the colony to be looked after. This would about make up the population of a third-rate county town in England,

like Thetford, if the white-skins only are reckoned, and not be much in excess of Leeds if all are included.

At the commencement of the present year the exact population of Natal, as nearly as it could then be ascertained, was:—

	Males.	Females.	Total.
White population	9,272	7,930	17,202
Indian Coolie population	4,651	1,647	6,298
Native population	108,983	117,556	226,539
Aliens and strangers	—	—	769
Total	—	—	250,608

4,087 persons were occupied with agriculture.

179 „ manufactures.

415 „ commerce.

It will be worth while, as an illustration of one of the social peculiarities of early colonial life, just to enumerate here in passing, what the State dignitaries are that are found essential to look after the order and interests of this handful of men.

A Lieutenant-Governor.

A Chief Justice.

Two Puisne Judges.

A Military Commandant.

Colonial Secretary.

„ Treasurer.

Secretary for Native Affairs.

Attorney-General.

Speaker, and Legislative Council of twelve elected members.

Auditor of Public Accounts.

Registrar of Deeds.

Surveyor-General.

Colonial Engineer.

Collector of Customs.

Port Captain.

Postmaster-General.

Master of the Court.

Sheriff.

Superintendent of Education.

Eleven resident Magistrates.

This enumeration appropriately brings in the consideration of the public expenditure of the colony, which is given in the following

statement, for the sixteen years that have now elapsed since its affairs have been growing into comparative importance.

Public Expenditure of Natal.

	£		£
1852	31,806	1860	80,385
'53	29,754	'61	121,711
'54	32,406	'62	94,525
'55	33,894	'63	96,381
'56	35,230	'64	142,766
'57	41,635	'65	169,214
'58	48,209	'66	186,895
'59	49,917	'67	178,961

Of the large expenditure ascribed to the year 1866, 50,000*l.* was attributable to public works of various kinds, and to the necessity of moving the troops to the frontier incident upon the disturbance caused by the war between the Dutch Boers and the Basutos.

The public revenue of Natal, raised to meet this expenditure, for the same series of years, was:—

Public Revenue of Natal.

	£		£
1852	29,650	1860	86,859
'53	30,272	'61	114,087
'54	31,397	'62	109,299
'55	34,050	'63	123,088
'56	36,096	'64	152,242
'57	45,733	'65	171,009
'58	47,043	'66	98,319
'59	50,905	'67	142,631

It will be remarked that during this series of years the expenditure only exceeded the revenue to a trifling amount on three years, namely:—

	£
1854. Excess of expenditure	1,009
'58. "	1,166
'61. "	7,624

On all other years there being a considerable margin in favour of the revenue, until the year 1866, when a new and very unwelcome order of affairs is entered upon. The excess of expenditure for the year 1866 was returned as 88,576*l.*, and for the year 1867, 36,330*l.*, and for the present year it is estimated that it will amount to 25,000*l.*, notwithstanding very large reductions having been made in public outlay.

The principal reason for this remarkable change in the aspect of financial affairs is at once suggested by Statement B (Appendix)

of the value of articles of import during the important years extending from 1852 to 1867.

It will be observed in that statement, that while the value of imported articles was 591,000*l.* in 1864, it was only 263,000*l.* in 1866, and 269,000*l.* in 1867. Now the import duties amount to 6 per cent. on value, and, therefore, form a considerable element in the public income. The customs' duties collected for the years from 1864 to 1867 were:—

	£
1864	59,900
'65	42,100
'66	29,500
'67	35,300

There is here, therefore, 30,000*l.* of the yearly deficiency at once accounted for by the failure of one source. The rest of the deficiency is really due to collateral influences hanging upon this one central pivot, namely, decreased commerce and stagnation of trade. A gentleman who spoke, in allusion to this subject, at a meeting of the Society of Arts, last week, and who has had an intimate experience in Natal affairs during nineteen years, accounted for the fact in the following graphic way. He said, "The birth of Natal may be stated to date from 1850, and from that time until 1860 very little was done beyond scratching up the soil in a few places in a most unbusiness-like way, and producing a few samples, which were laid before the world as specimens of what could be produced. Almost all those who went out at first were shopkeepers, who tried to live upon one another, and the consequence was that in a few years a vast number of them had to pay their creditors in England with a few shillings in the pound." In the years 1864 and 1865 so much more of English merchandise was imported into Natal than could be turned to account under this false principle of "shopkeeper's speculation," that the merchants' stores became glutted with goods, and importation fell suddenly to nearly one half. It will be noticed that, from the years 1864 to 1867, Natal set itself honestly to work to meet the change in its domestic affairs, by diminishing its consumption of imported luxuries. Thus, the importation of cotton and woollen fabrics was diminished from 91,000*l.* value to 72,000*l.* value. Leather manufactures were reduced from 22,000*l.* to 10,000*l.* Wearing apparel, from 76,000*l.* to 44,000*l.* Saddlery, from 11,000*l.* to 900*l.* Cabinet ware, from 9,000*l.* to 3,000*l.* Iron ware, from 57,000*l.* to 11,000*l.* Wood, from 8,000*l.* to nothing. Implements and machinery, from 12,000*l.* to 1,900*l.* Beer, spirits, and wine, from 206,000*l.* to 78,000*l.*; and oilmen's stores, from 16,000*l.* to 6,000*l.*

A still more important side of this question, however, rises into

view, when the attention is turned from the imports to the exports of the colony. Previously to the year 1852 the Natal exports were not worthy of notice. In the year 1852 their value was under 28,000*l.*; in the year 1862 the value was 127,000*l.* In the year 1867 it was 225,000*l.*; in the first nine months of the present year it was 200,000*l.* In the year 1852 the value of arrowroot exported was nothing; in 1867 it was 9,000*l.* In 1852 the value of salt meat exported was nothing; in 1867 it was 4,000*l.*

In 1852 the export of living animals was nothing; in 1867 it was 1,400*l.*

In 1852 the export of wool was 2,000*l.*; in 1867 it was 80,000*l.*

In 1852 the export of cotton wool was 65*l.*; in 1867 it was nearly 5,000*l.*

In 1852 the export of sugar was 12*l.*; in 1867 it was 70,000*l.*

In 1852 the export of spices was nothing; in 1867 it was 1,200*l.*

It is expected that the exports of sugar to England and to the Inland States for the present year will rise to the value of 130,000*l.* sterling.

Statement C (Appendix), gives the exact value of the principal articles of export for the series of years, from 1852 to 1867.

In the following table the value of the same exports, for the first nine months of 1867 and of the current year, is given :—

	Nine Months, 1867.	Nine Months, 1868.
	£	£
Arrowroot	5,928	2,385
Beans and peas	1,266	707
Flour and meal	455	1,031
Grain	3,912	6,295
Butter	7,861	6,069
Salt meat	4,019	4,596
Hides	3,525	6,668
Horns and hoofs	525	325
Skins	1,567	6,416
Living animals	350	3,434
Ivory	5,761	5,732
Ostrich feathers	8,057	6,940
Wool	72,939	82,567
Cotton	4,311	1,785
Sugar and molasses	38,586	58,388
Spices, cayenne pepper	1,116	91
Manufactured tobacco	—	121
Coffee	3	204

It will be remarked, that coffee for the first time appears in the exports of the last nine months to the extent of twenty tons. A considerable quantity of both coffee and tobacco are now grown in the colony, but the produce will continue to be consumed within

colonial limits for some years to come. It will be noted, on reference to the returns of imports, that the value of coffee imported has been reduced within five years from 26,000*l.* to 9,000*l.*, and the value of manufactured tobacco from 1,600*l.* to 1,000*l.* This is almost entirely due to the increase of the colonial production. The actual consumption of these articles within the colony has scarcely diminished. The reduction of the imports of flour and grain within three years, from 38,000*l.* to 14,000*l.*, must be viewed in a similar light as these are necessaries of life rather than luxuries. At the beginning of the present year there were 3,155 acres of land in the colony under coffee cultivation, yielding about 110,000 lbs. of the berry for the last year's crop. There were 163 acres under tobacco, yielding 38,000 lbs. There were 87,591 acres under the various grain crops, estimated to yield about 1,170,000 bushels of grain.

The following statement gives the exact values of Natal imports and exports for the quarter of a century during which the colony has had an economical and industrial history:—

<i>Imports.</i>			
	£		£
1843	11,712	1856	102,512
'44	41,141	'57	184,549
'45	40,591	'58	172,832
'46	41,598	'59	219,917
'47	46,981	'60	354,987
'48	46,204	'61	402,689
'49	55,921	'62	449,469
'50	111,015	'63	473,333
'51	125,462	'64	591,686
'52	103,701	'65	454,206
'53	89,434	'66	263,305
'54	112,492	'67	269,580
'55	86,551		
<i>Exports.</i>			
	£		£
1843	1,348	1856	56,562
'44	11,387	'57	82,496
'45	10,400	'58	100,587
'46	17,142	'59	103,966
'47	14,376	'60	139,698
'48	10,866	'61	119,299
'49	11,991	'62	127,288
'50	17,106	'63	158,565
'51	21,817	'64	220,267
'52	27,845	'65	210,254
'53	36,458	'66	203,402
'54	43,661	'67	225,671
'55	52,073		

A reference to the figures of this statement will show that, in

the year 1864, the value of the imports received into Natal exceeded the value of the exports made from the colony by no less a sum than 371,000*l.*, the imports having doubled within a period of four years and a-half, during which the European population had not increased 4,000. In the last nine months the excess of the value of imports over exports was only 12,359*l.*, although the actual amount of imports had increased, under some slight return of prosperity, by 8,838*l.* This result is due to the threefold influence, 1st, of a more sparing use of imported luxuries, not ranking as indispensable necessities of life with a mixed and impoverished community; 2nd, to a large increase within the colony of certain articles of consumption hitherto largely imported to supply the current demand; and, 3rd, to the great increase of exportable produce under the displacement, by the wholesome pressure of dire necessity, of "shopkeepers living upon each other," by men recognising the necessity of living instead by labour applied to the land.

It should be noted, in regard to the exports of Natal, that the ivory and ostrich feathers are not properly productions of the colony. They are collections made by the Natal merchants, in the process of trade, from the lands beyond the inland frontier. Some portion of the horns, skins, hides, and wool are also productions of the extra-colonial territory, but it is not possible to say what proportion of these exports should be referred to this source. The produce of Natal wool, for the year, was estimated at 434,000 lbs.

At the commencement of the present year, the portion of land in Natal under cultivation was distributed in the following way:—

	Acres.		Acres.
Under wheat	2,845	Under arrowroot	978
„ maize	39,581	„ cotton	1,430
„ millet	2,495	„ flax	2
„ oats	2,281	„ cayenne.....	64
„ barley	466	„ tobacco.....	207
„ beans and buckwheat...	1,158	„ potatoes	1,103
„ sugar	16,882	„ sweet potatoes	1,205
„ coffee	4,850		

The amount of crops actually reaped in the last year was—

Wheat (3-bushel sacks) muids	11,200	Cayenne	lbs.	37,512
Maize	„	Tobacco	„	81,026
Millet	„	Potatoes	muids	17,150
Oats.....	„	Sweet potatoes	„	56,594
Oat hay	tons	Cotton.....	lbs.	152,751
Barley.....	muids			
Beans	„			
Buckwheat	„			
Sugar	tons			
Coffee	lbs.			
Arrowroot	cwts.			
Flax.....	lbs.			

Native Crops—

Maize	muids	294,759
Kafir corn (millet)....	„	127,367
Sweet potatoes	„	15,520
Sugar	tons	114

There was also an additional quantity of land cultivated by the natives :—

	Acres.	
Under maize	65,000	yielding 295,000 muids.
„ millet	24,000	„ 128,000 „
„ sweet potatoes	661	„ 15,500 „
„ sugar	103	„ 114 tons.

The entire extent of land cultivated in the colony is—

	Acres.
By European settlers	103,000
„ natives	90,000

Of the land cultivated by white settlers—

46,000 acres	were in crop.
31,000 „	had been reaped.
15,000 „	were broken up, but not in crop.

A very considerable proportion of the land not under cultivation consists of luxuriant coarse natural pasture.

The Statement A (in the Appendix) shows the progress of the chief branches of agricultural produce during the last eight years.

It will be remarked, that during these years the land under sugar has been quadrupled; the land under coffee increased twenty-eight fold; the land under maize nearly doubled; and that cotton and tobacco are pretty well new articles of attention within the period. The land under wheat has been about doubled, and the land under oats considerably reduced. Corn crops are not generally favourite crops, because, under careless management, they are liable to rust, in consequence of the ordinary harvest time being a wet period. They will, however, certainly return into favour as more skilful management is accorded them.

The live stock upon the pastures of the colony at the commencement of the present year was :—

1. Belonging to European settlers :—

Horses.....	11,906	Woolled sheep	234,486
Mules	188	Angora goats	24,605
Asses	100	Common „	22,288
Horned cattle.....	109,647	Pigs.....	9,366

2. Belonging to natives :—

Horses.....	11,383	Goats	117,123
Horned cattle.....	301,934		
Native sheep, with hairy fleece	51,778	Pigs.....	1,831

The economical yield of the live stock of European settlers for the year was estimated at :—

	lbs.		lbs.
Butter	298,785	Wool	434,573
Cheese.....	4,806		
Bacon	65,808	Angora hair	96

There were also about 11,000 gallons of rum distilled in the coast districts.

The general growth of the live stock of the colony, during a period of ten years, is shown in the following statement:—

Kind of Stock.	1857.	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.
Horses	8,157	8,560	8,221	7,973	11,105	12,594	14,274	15,294	16,782
Horned cattle } sheep.....	102,153	34,574	172,291	113,276	274,040	241,861	289,184	303,344	339,547
Goats.....	37,595	63,250	85,559	76,499	122,425	149,164	171,654	212,874	252,577
Pigs	25,149	25,909	117,719	38,447	86,288	116,091	126,621	151,824	131,482
	—	—	1,566	1,462	3,307	4,924	5,172	2,231	1,771

The horses have nearly trebled within a period of ten years; the horned cattle have quadrupled; and the sheep, woolled and hairy, have multiplied about eight-fold. Between the years 1857 and 1862 the increase of horned cattle was affected very seriously and injuriously by the introduction of epidemic lung disease, before unknown in the colony. The murrain has now pretty well disappeared, and the cattle of the colony are again multiplying fast. It was the occurrence of this epidemic among the herds of the old settlers which in the main led to the introduction of woolled sheep.

The following statement shows the number of mills and manufactories at work in Natal eight years since, and at the beginning of the present year:—

	1860.	1868.
Steam sugar mills	31	55
Water „	3	1
Animal power mills	6	2
Water-power corn mills	13	28
Steam-power „	3	2
Arrowroot mills.....	22	14
Coffee pulpers.....	4	8
Brick fields.....	5	10
Tile yards	5	5
Steam-power saw mills	—	5
Water-power „	6	4
Handsaw pits	—	23
Tobacco manufactories	—	2
Soap and candle manufactories.....	3	3
Soda water manufactories.....	—	4
Waggon „	3	10
Distilleries	2	4
Breweries	—	2
Tanneries	—	2
Steam iron works	1	4
Bone mill	—	1
Steam cotton gin	—	1
Printing presses	4	6

The Statements D and E (Appendix) express the variation of prices of certain imported articles and articles of colonial produce in the colony during eight years:—

The prices returned for the most important articles of import and colonial produce, at the beginning of the present year, are:—

	£	s.	d.	£	s.	d.		£	s.	d.	£	s.	d.
Horses	6	10	0	15	0	0	Rum, per gallon	0	5	0	0	11	0
Mules	8	10	0	15	0	0	Coffee, per cwt.	3	10	0	4	15	0
Draught oxen	3	0	0	5	10	0	Arrowroot, ,, ...	1	16	0	2	17	0
Slaughter ,, ...	2	5	0	6	10	0	Cayenne, ,, ...	1	10	0	3	0	0
Milch cows	3	10	0	7	0	0	Tobacco, ,, ...	2	15	0	5	12	0
Woolled sheep....	0	12	6	0	17	6	Potatoes, per } muid	0	5	0	0	13	0
Kafir ,, ...	0	6	0	0	17	6	Sweet potatoes, } per muid	0	2	6	0	7	6
Angora goats	0	12	0	0	17	6	Butter, per lb.	0	0	6	0	1	6
Ordinary ,, ...	0	5	0	0	12	0	Hides, ,, ...	0	0	0	4	2	0
Swine	0	16	0	3	10	0	Sheepskins, each	0	0	6	0	1	3
Fowls, per pair	0	0	9	0	2	0	Bacon, per lb.	0	0	6	0	1	3
Ducks, ,, ...	0	2	6	0	5	0	Cheese, ,, ...	0	0	8	0	1	6
Washed wool, } per lb. }	0	0	9	0	1	9	Firewood, per } waggon load }	1	0	0			
Wheat, pr. muid	0	18	6	1	10	0	Building tim- } ber, p. waggon }	4	10	0			
Maize ,,	0	5	0	0	13	6	load						
Oat hay, per } 100 lbs. }	0	4	0	0	7	0							
Sugar, per ton....	17	0	0	21	0	0							

Very much of the large range of price is due to the thinly-peopled character of the land and the difficulty of internal transport. The following prices were quoted at the commencement of the present year, as representing the average prices of the articles named, as nearly as it was practicable to give them:—

	£	s.	d.		s.	d.
Wheaten flour, per barrel } of 196 lbs. }	2	3	4	Beef, per lb.	—	3 $\frac{3}{4}$
Wheat, per imperial bushel	—	6	8	Mutton, ,,	—	6 $\frac{1}{4}$
Wheaten bread, per lb.	—	—	3 $\frac{3}{4}$	Pork, ,,	—	6
Horned cattle, each	4	8	10	Rice, ,,	—	4 $\frac{3}{4}$
Horses	10	3	2	Coffee, ,,	1	4
Sheep	—	12	7 $\frac{1}{2}$	Tea, ,,	3	11 $\frac{1}{2}$
Goats	—	8	3	Sugar, ,,	—	4 $\frac{1}{2}$
Swine	1	8	1	Salt, per cwt.	15	6
Milk, per quart	—	—	4 $\frac{1}{2}$	Cape wine, per bottle	2	10 $\frac{1}{2}$
Butter, fresh, per lb.	—	1	3	Brandy, ,,	6	1
,, salt, ,,	—	—	11 $\frac{1}{2}$	Beer, ,,	1	10 $\frac{3}{4}$
Cheese, per lb.	—	1	— $\frac{3}{4}$	Tobacco, per lb.	1	10
				Rum, per gallon	12	2 $\frac{1}{2}$

The average rates of wages in the colony at the commencement of the present year were:—

	£	s.	d.
General farm servant, per annum.....	48	—	—
Female domestic „ „.....	18	17	2
Skilled artisans, per day	—	6	8
Native servant, with rations, per month.....	—	7	6
White waggon driver, per month.....	3	5	8
Native „ „ „.....	1	1	—
Native leaders, „ „.....	—	6	10

The following statement gives the variation of the rates of labour through a period covered by the previous eight years.

Rates of Wages for various Descriptions of Labour in the Colony of Natal for the Year 1857, and for the Eight Years ended with 1866.

Description of Labour.	1857.	1859.	1860-61-62.
	£ s. d.	£ s. d.	£ s.
Domestic, female, per annum	16 14 —	17 — —	24 —
Predial, or farm servant „	36 13 —	36 — —	60 —
Trades, skilled artisans, per day	— 7 1	— 8 6	— 8
Kafir, with rations, per month	— 6 3	— 8 —	— 10
Waggon driver (white person), } per month	3 12 —	3 12 —	{ 1860 5 10 '61 6 — '62 5 10
Waggon driver (coloured), per } month	1 3 6	1 5 —	{ 1860 2 — '61 1 10 1860 — 15 '61 — 10 '62 — 10
Leaders, per month	— 6 2	— 8 —	

Description of Labour.	1863.	1864.	1865.	1866.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Domestic, female, per annum	20 — —	18 10 —	23 5 10	15 5 5
Predial, or farm servant „	65 — —	48 10 —	44 6 8	45 6 8
Trades, skilled artisans, per day	— 8 4	— 8 2	— 7 4	— 7 6
Kafir, with rations, per month	— 10 —	— 10 5	— 9 9	— 8 3
Waggon driver (white person), } per month	4 — —	4 10 —	3 5 —	3 13 —
Waggon driver (coloured), per } month	1 10 —	1 19 —	1 9 —	1 5 2
Leaders, per month	— 10 —	— 10 3	— 10 3	— 8 2

At the commencement of the present year there were sixty-six schools in the colony supported or aided by the public revenue.

The attendance at these schools was:—

Boys	1,077
Girls	694
Total	1,771

The average daily attendance of pupils at these schools was 1,290.

The amount contributed by the Government to the support of these schools for the last year was 3,878*l*.

The amount contributed directly by the parents of the pupils was 2,666*l*.

The entire cost of education (exclusive of a very few private schools, of which returns are not available) was 6,545*l*.

Giving an average cost of 3*l*. 14*s*. for each pupil.

Allowing for private schools, about one in eight, in round numbers, of the whole population of Natal were in attendance at schools.

The depressed social condition of the colony during the two years extending from 1865 to 1867 was distinctly obvious in the comparison of the sources from which the cost of the schools was drawn in the year 1865, with the figures given above.

In the year 1865 the attendance of pupils was :—

Boys	1,052
Girls	692
Total	<u>1,744</u>

The average daily attendance of pupils was 1,455.

The Government share of the cost of the schools was 3,615*l*.

The general contribution was 3,061*l*.

The total cost of education, 6,676*l*.

The number of pupils attending the public schools of the colony for the preceding eight years, from the year 1859, in which the appointment of a Government Superintendent of Education for the colony was made, was :—

	Boys.	Girls.	Total.
1859.....	706	405	1,111
'60.....	609	490	1,009
'61.....	597	440	1,037
'62.....	751	574	1,325
'63.....	789	582	1,371
'64.....	931	649	1,580
'65.....	1,101	695	1,796
'66.....	1,107	678	1,785

In the year 1865 there were thirty-four native schools, aided and inspected by Government, of which six were industrial training schools, and the rest schools for general education, but requiring the teaching of the English language.

One hundred and twenty natives were in training in the industrial schools, and 372 native females were taught to sew.

The entire attendance at the schools was about 1,700.

The cost of the schools to the Government for the year was:—

	£
Industrial schools	1,000
Common „	909

The natives themselves in this year contributed 205*l.* towards the support of the schools.

Thus about 1 in every 100 of the native population of Natal was receiving some kind of useful civilised instruction in the year 1865; that is, immediately before the author left the colony. In this particular, most probably, about the same condition of affairs is maintained at the present time.

The number of prisoners in confinement in the several gaols of the colony, at the Michaelmas term, during the last six years, was:—

	White Prisoners.	Native Prisoners.
1862.....	31	131
'63.....	48	165
'64.....	61	134
'65.....	35	164
'66.....	37	214
'67.....	33	209

The greatest number of prisoners found in the gaols, at any one time, during the same series of years, was:—

	White Prisoners.	Coloured Prisoners.
1862.....	40	179
'63.....	50	184
'64.....	72	199
'65.....	55	264
'66.....	51	314
'67.....	59	333

Of the number of prisoners in the gaols at the Michaelmas term of last year, the cases were:—

	White Prisoners.	Black Prisoners.
Felony	5	58
Theft	18	81
Assault	1	21
Other offences	8	56

The revenue derived from the post office of the colony during the last four years was:—

	£
1864.....	6,000
'65.....	5,030
'66.....	4,768
'67.....	4,482

The colonial expenditure for imported beer, wine, and spirituous liquors was, for—

	£
1858	13,821
'64	26,861
'65	38,754
'66	15,303
'67	15,030

For the first nine months of the present year, 13,017*l*.

The public debt of the colony, irrespective of the excess of expenditure over revenue for the last two years, at the beginning of the present year was :

For the harbour improvement, 163,000*l*., to be paid off in twenty-three years ;

For the introduction of Indian coolies upon the plantations, 50,000*l*., to be paid off in thirty-one years.

The expenditure made by the Imperial Government for the defence of the colony, during the last seven years, was :—

	Commissariat.	Ordnance.
	£	£
1861	39,744	4,871
'62	33,076	4,076
'63	38,970	4,816
'64	33,934	3,193
'65	41,453	3,923
'66	33,937	2,328
'67 commissariat and ordnance	£36,779	

The following statement shows the several sources from which the public revenue of the colony was raised in the last year :—

	£		£
Customs	35,399	Miscellaneous receipts	1,001
Port and harbour dues	921	Interest of deposits	172
Excise	1,413	Surcharges recovered	33
Land sales	2,806	Receipts on reserved list	1,232
„ revenue	4,649	Various receipts in aid	4,721
Transfer duties	4,728	Repayment of advances	611
Auction dues	1,769	Remittances between chests	5,340
Stamps	1,845	Bills	3,101
Taxes (native hut tax)	22,067	Transfer from harbour works	1,505
Postage	4,482	Loans incurred	14,957
Fines and fees of court	3,764	Receipts from Cape Govern- }	200
Fees of office	1,022	ment	
Sales of Government property	322	Drafts between stations	4,797
Reimbursement of advances	4,297		
Sale of ammunition	2,589		
		Total general revenue	129,755

Public loans account £12,876.

The classification of the colonial expenditure for the past year is given in the following statement:—

	£		£
Civil establishments	17,880	Conveyance of mails	7,643
Judicial „	14,444	Public works and buildings....	7,915
Ecclesiastical „	1,050	Roads and bridges	7,076
Educational „	1,480	Miscellaneous services	10,770
Medical „	1,116	Expenditure on natives	227
Police and gaols	3,967	Native expenditure — re- } served civil list	3,612
Legislative council	925	Immigration	5,885
Pensions	122	Gratuities in aid of public } institutions	1,937
Revenue service	1,894	Allowance to imperial troops	4,259
Administration of justice	2,199	Special payments	1,127
Educational grants	2,694	Mounted police.....	964
Public hospitals	515	Payments of interest—Go- } vernment bonds	13,909
Police and gaols, beyond } establishments	3,933	Sums refunded	187
Rent of public buildings	686		
Transport (travelling expenses } and conveyance of specie } and convicts).....	1,560	Total actual expenditure....	118,328

The climate of Natal is a very remarkable one; and it is now quite possible to reduce several of its most important and interesting features to statistical expression.

In a period of eight years 20 feet 2 inches of rain fell at the capital city of Maritzburg, which is a little over forty miles from the sea, in a direct line, and 2,095 feet high.

Of this quantity 16 feet 8 inches belonged to the six months, October, November, December, January, February, and March, which, therefore, constitute the wet season.

Three feet two inches belonged to the months of April, May, August, and September.

Four inches belonged to the months of June and July.

The average monthly fall for one of the six wet months is 4·14 inches.

The average monthly fall for one of the dry months is 0·24 of an inch. The average monthly fall for each of the intermediate months is 1·21.

Rain falls on 134 days in the year, and on $15\frac{3}{4}$ in each one of the six wet months. The greatest and the mean fall of rain for each month in the year is given in the following table:—

Rain-fall in Inches for the Months.	Greatest Fall in Eight Years.	Mean Fall for Eight Years.	Rain-fall in Inches for the Months.	Greatest Fall in Eight Years.	Mean Fall for Eight Years.
January.....	6·63	3·92	July	0·74	0·23
February	7·59	4·41	August	3·44	1·14
March	5·04	3·29	September.....	3·11	1·32
April	2·02	1·44	October.....	7·21	3·60
May	2·94	0·95	November.....	8·95	4·58
June	1·28	0·26	December	6·23	5·04

The mean temperature of the year at Maritzburg, for a period of eight years, was 64·71° Fahrenheit.

The highest temperature in the eight years was 97·60°.

The lowest temperature 29·00°.

The greatest range of temperature in the eight years, 68·60°.

A freezing temperature was recorded at nights five times within the eight years.

There are about twelve days in the year on which the temperature rises to 90°.

About fifty days on which it rises to 84°.

About one hundred and fifteen days in the year on which the temperature does not exceed 70°.

Eight days in the year on which it does not rise to 60°.

About eighty nights in the year on which the temperature falls to 50°.

About two hundred and ten nights on which it falls to 60°.

Seven nights on which it does not fall to 70°.

Twenty-three nights on which it falls below 40°.

In the following statement the mean, highest, and lowest temperatures of the several months of the year are given:—

Mean Temperature.

Months.	Mean of Eight Years.	Months.	Mean of Eight Years.
January	71·4	July	55·2
February	71·8	August	59·7
March	69·7	September	65·1
April	64·8	October	66·6
May	59·3	November	67·1
June	55·2	December	70·4

Highest Temperature.

Months.	Highest in Eight Years.	Mean Highest of Eight Years.	Months.	Highest in Eight Years.	Mean Highest of Eight Years.
January	93·0	90·3	July	82·2	79·1
February	97·1	91·0	August	89·8	84·2
March	92·8	87·5	September	95·4	92·1
April	89·5	84·6	October	96·0	90·7
May	85·2	79·4	November	97·2	91·0
June	78·2	74·7	December	97·6	92·3

Lowest Temperature.

Months.	Lowest in Eight Years.	Mean Lowest of Eight Years.	Months.	Lowest in Eight Years.	Mean Lowest of Eight Years.
January.....	51·8	57·8	July	29·0	34·2
February	55·8	58·4	August	34·8	38·7
March	42·0	52·2	September.....	38·0	43·5
April	40·2	46·3	October.....	45·2	48·7
May	35·4	39·6	November.....	45·2	50·9
June	32·0	35·8	December	52·2	56·4

The average temperature of the coast district is about three degrees and a-half Fahrenheit above that of Maritzburg.

In 1,095 evenly distributed observations the wind was blowing at Maritzburg—

820 times from the cool quarter, off the sea.

140 „ „ hot quarter, off the land.

130 „ „ along shore.

About twenty-five times in the year a strong, very dry, hot wind from the north-west blows at Maritzburg, for a few hours only at a time. The occurrence of this wind affords a very interesting illustration of the power of statistical treatment to elicit law out of seeming confusion. If these hot winds are noted during any single year, it is not possible to detect any clear order in their recurrence; but if a period of eight years is taken, and the average number of hot winds for each month during the series of eight years is deduced, the order given in the following table becomes immediately apparent.

Hot Winds.

Days on which Strong Hot Winds occurred.	Greatest Number in Eight Years.	Mean for Eight Years.	Days on which Strong Hot Winds occurred.	Greatest Number in Eight Years.	Mean for Eight Years.
January.....	3	1·3	July	4	2·3
February	3	1·2	August	7	3·2
March	4	0·7	September.....	8	5·1
April	3	0·8	October	8	4·2
May	3	1·2	November	4	3·0
June	3	0·8	December	5	1·7

The hot wind increases in frequency from June to September and decreases in frequency from September to December, being very

unfrequent for the remaining months of the year, from January to June. In other words, it is a phenomenon entirely dependent on the great seasonal march of the vertical sun to and fro across the parallels of latitude.

In speaking of the Kafir race, the author wishes it to be distinctly understood, that although the natural tendency of these people is to repose and indolence, this by no means implies any incapability of being induced to accomplish much useful work when placed within the influence of European energy and direction. There were between eleven and twelve thousand natives reported to have engaged themselves in some kind of useful service to white masters during the last year. The author really estimates the capacities of the south-eastern African Kafir race very highly, under the circumstance of judicious handling and management. The pith of the matter is, simply, that this race can be raised in civilisation by appropriate action from without, but does not raise itself through internal and inherent development. This, however, in common with various other topics of less local interest, have been avoided on this occasion, because the time has not yet come to deal with it statistically. The author has considered that hopes, anticipations, fears, and regrets are not properly topics for a meeting of the Statistical Society.

It should also be understood that all the methods and processes employed for collecting information regarding economical facts, are necessarily rude and imperfect in young lands circumstanced like Natal. The figures presented in this paper have been collected with considerable care, and they are the best that are available at the present time. They must, however, on the whole, be accepted as mere approximations to the truth. They are certainly near and illustrative approximations, and, therefore, possess very considerable positive value. The author also desires to say that he has taken care that the points which he has brought into leading prominence are those upon which most exact reliance can be placed. Where he has been able to see his own way clearly, he has pointed to the deductions which have seemed to him to be obvious and unmistakable. In all other instances he has left the facts to speak, without interpretation, for themselves.

APPENDIX.

A.—Land under Crops in the Colony of Natal, 1859-66.

Nature of Crops.	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Wheat	1,459	1,410	1,443	1,075	613	1,139	1,324	1,859
Indian corn	24,368	43,703	24,498	33,682	24,451	23,475	28,342	63,260
Kafir „	3,215	11,266	8,600	5,167	7,430	11,540	8,953	22,155
Oats	7,695	5,939	7,954	2,547	3,772	4,062	1,141	1,148
Barley	444	210	342	277	314	313	190	206
Beans	147	170	178	206	146	229	137	245
Buckwheat	82	60	37	101	98	125	65	113
Potatoes, common	1,929	416	563	551	509	594	629	1,108
„ sweet ...	576	488	629	1,010	950	758	832	1,456
Sugar cane	4,596	6,341	7,442	8,980	9,836	10,766	11,590	12,796
Coffee	169	166	164	218	269	792	1,991	3,154
Rice	1	—	—	—	—	—	—	—
Arrowroot	1,039	680	235	130	188	226	397	451
Cotton	—	18	63	235	1,230	2,580	1,361	1,262
Tobacco	—	33	221	82	353	313	260	164
Vegetables	344	371	309	523	642	834	830	796
Total cultivated } area	46,064	71,271	52,678	54,784	50,801	57,746	58,042	110,176

C.—Value of the Exports from the Colony of Natal, 1852-67.

	1852.	1857.	1862.	1863.	1864.	1865.	1866.	1867.
Arrowroot	£ —	3,136	1,547	2,801	2,848	3,943	5,744	9,139
„ and peas	338	142	140	231	56	95	439	1,266
„ and meal	—	948	737	252	47	518	157	—
„	940	771	4,970	9,008	788	846	7,511	6,184
„	6,701	12,142	11,381	8,204	5,650	3,395	11,114	8,056
„ meat	—	1,413	183	124	3	—	1,672	4,006
„	1,196	22,365	5,514	6,431	4,783	6,236	5,471	4,252
„ and hoofs	41	602	882	1,048	272	759	385	—
„ of all kinds	—	268	728	1,315	2,083	1,942	1,052	2,019
„ animals, living, horses, &c.	—	434	486	145	105	239	131	1,429
„	6,274	18,170	27,059	40,736	26,254	19,154	6,673	5,908
„ feathers	—	875	2,510	7,255	6,972	11,299	10,921	11,200
„	2,026	9,887	38,432	48,526	61,720	66,747	71,433	80,999
„	65	—	62	832	2,646	3,984	4,699	4,902
„ and molasses	12	2,291	21,293	26,216	94,359	76,618	66,253	70,563
„	—	—	—	140	86	387	1,172	1,226
Total value of articles } export	£ 27,846	82,497	127,228	158,565	220,267	210,254	203,402	225,671

B.—*Value of the Imports into the Colony of Natal, 1852-67.*

	1852.	1857.	1862.	1863.	1864.	1865.	1866.	1867.
Cotton manufactures £	10,953	16,206	28,496	26,412	54,346	33,832	22,783	41,359
„ blankets and sheets	3,544	9,648	12,624	3,073	4,090	10,686	5,427	9,237
Linen	1,001	3,262	5,417	3,346	6,304	5,999	3,483	6,109
Woollen manufactures	3,210	5,252	6,025	9,885	19,387	11,437	7,734	9,490
„ blankets	2,297	3,270	4,572	4,721	7,824	14,270	5,466	6,137
Leather manufactures	2,050	3,855	10,302	17,414	22,370	15,675	6,149	10,503
Apparel, &c.	2,572	6,889	24,538	23,476	34,606	27,702	16,045	17,154
Haberdashery.....	8,413	21,372	25,685	33,556	42,044	38,134	28,002	27,153
Beads	1,982	3,466	1,986	2,483	3,566	1,386	599	375
Saddlery, &c.	1,149	3,645	5,813	8,757	11,218	8,584	1,814	957
Cabinet and upholstery } ware	543	4,732	9,469	6,625	9,568	9,599	2,662	3,628
Iron of all kinds	556	1,928	11,776	18,431	24,230	19,442	2,557	4,057
Ironmongery, cutlery, &c.	4,559	9,082	31,740	15,558	33,073	28,508	10,091	7,078
Wood, boards, &c.	377	611	5,952	5,781	8,946	12,113	87	—
Agricultural implements	1,735	1,743	5,077	4,094	4,558	1,172	1,069	1,200
Machinery and railway } plant	925	4,874	12,219	10,705	9,796	9,458	9,405	778
Harbour works	—	—	52,772	23,601	2,600	—	—	—
Ale and beer gals.	(25,640	31,401	152,563	55,994	123,051	168,093	102,236	73,747)
„ value £	2,224	3,743	19,406	9,765	13,328	22,048	8,927	8,896
Spirits	4,585	7,775	11,884	17,284	22,612	16,706	6,196	6,136
Wine	1,835	2,939	8,320	8,632	14,603	9,344	5,624	2,841
Coffee	5,090	10,373	14,622	26,443	23,150	9,937	14,443	9,816
Tea	1,633	2,882	7,313	7,598	7,726	4,747	3,399	4,932
Sugar, raw	4,429	1,366	422	281	5	—	—	—
„ refined.....	1,042	839	2,616	2,228	2,236	1,264	883	564
Oilmen's stores	2,347	4,317	13,640	10,559	16,406	9,961	5,330	2,554
Tobacco and cigars.....	1,721	1,017	1,381	8,137	6,560	1,955	1,459	1,036
Flour and meal	8,948	5,577	20,143	29,608	31,320	15,728	22,931	13,482
Grain of all kinds	599	634	4,762	6,842	6,918	9,285	2,838	3,426
Rice.....	641	1,101	6,096	9,274	9,716	9,401	10,520	10,785
Total value of articles } of import } £	103,701	184,549	449,469	473,333	591,686	454,206	263,305	269,580

D.—Prices of Articles Imported into Natal, 1857-66.

Imported Articles.	Prices.														
	1857.			1859.			1860.			1861.			1862.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Wheaten flour, p. barrl.	2	12	6	2	10	—	2	15	—	2	15	—	2	17	6
Wheat, per bushel	—	10	—	—	9	9	—	15	—	—	11	—	—	12	6
Wheaten bread, pr. lb.	—	—	3 $\frac{1}{4}$	—	—	3	—	—	3	—	—	4	—	—	4 $\frac{3}{4}$
Horned cattle, each	3	8	6	6	18	—	7	10	—	8	10	—	6	18	6
Horses, each.....	18	—	—	19	—	—	15	—	—	16	—	—	14	16	—
Sheep „	—	10	6	—	19	—	1	—	—	—	—	—	1	—	—
Goats „	—	5	3	—	9	6	—	6	—	—	9	—	—	14	—
Swine „	1	1	—	1	18	—	1	10	—	2	—	—	2	—	—
Milk, per quart	—	—	3 $\frac{3}{4}$	—	—	3 $\frac{3}{4}$	—	—	4	—	—	7 $\frac{1}{2}$	—	—	5 $\frac{1}{2}$
Butter, fresh, per lb.	—	1	2	—	1	9	—	1	6	—	1	6	—	1	8
„ salt „	—	1	1 $\frac{1}{2}$	—	1	6	—	1	3	—	1	—	—	1	2 $\frac{1}{2}$
Cheese, per lb.	—	1	—	—	1	—	—	1	2	—	1	9	—	1	4
Beef „	—	—	3	—	—	4	—	—	5	—	—	6	—	—	5 $\frac{1}{2}$
Mutton „	—	—	5 $\frac{1}{2}$	—	—	6	—	—	7	—	—	7	—	—	7
Pork „	—	—	6	—	—	6	—	—	7	—	—	7	—	—	7
Rice „	—	—	3	—	—	5	—	—	3	—	—	—	—	—	4 $\frac{1}{2}$
Coffee „	—	1	—	—	1	1 $\frac{1}{2}$	—	1	—	—	1	—	—	1	2
Tea „	—	2	11	—	3	1 $\frac{1}{2}$	—	3	6	—	—	—	—	3	9
Sugar „	—	—	5 $\frac{1}{4}$	—	—	5	—	—	4	—	—	4	—	—	4 $\frac{1}{2}$
Salt, per cwt.	—	11	1	—	11	—	—	10	—	—	12	—	—	12	—
Wine (Cape), per bot.	—	1	4	—	1	10	—	1	6	—	1	8	—	2	6
Brandy, per bottle	—	2	8 $\frac{1}{4}$	—	3	9	—	4	—	—	5	—	—	4	10
Beer „	—	1	4 $\frac{1}{2}$	—	1	4	—	1	6	—	1	6	—	1	6
„ draught, per qt.	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—
Tobacco, per lb.	—	1	9	—	1	9	—	3	—	—	3	6	—	5	—

Imported Articles.	Prices—Contd.														
	1863.			1864.			1865.			1866.					
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.			
Wheaten flour, p. barrl.	2	12	3	2	15	5	2	2	8	2	18	6			
Wheat, per bushel	—	9	8	—	12	—	—	11	2	—	12	4 $\frac{3}{4}$			
Wheaten bread, pr. lb.	—	—	4	—	—	4	—	—	3 $\frac{1}{2}$	—	—	5 $\frac{1}{4}$			
Horned cattle, each	7	12	—	7	10	—	5	12	—	4	16	5 $\frac{1}{2}$			
Horses, each.....	18	2	—	7	10	—	12	6	6	10	15	—			
Sheep „	—	19	—	1	6	9	—	17	6	—	15	7			
Goats „	—	11	6	—	14	3	—	11	8	—	10	4 $\frac{1}{2}$			
Swine „	1	17	6	1	6	6	1	11	9	1	5	2 $\frac{1}{2}$			
Milk, per quart.....	—	—	5	—	—	5	—	—	5	—	—	4 $\frac{1}{2}$			
Butter, fresh, per lb.	—	1	5	—	1	3	—	1	4	—	1	2 $\frac{3}{4}$			
„ salt „	—	—	11 $\frac{1}{2}$	—	1	—	—	1	2	—	1	— $\frac{1}{4}$			
Cheese, per lb.	—	1	2	—	1	7	—	1	3	—	1	3			
Beef „	—	—	5 $\frac{1}{2}$	—	—	5	—	—	5	—	—	4 $\frac{1}{4}$			
Mutton „	—	—	7	—	—	7 $\frac{1}{2}$	—	—	6 $\frac{3}{4}$	—	—	6 $\frac{1}{4}$			
Pork „	—	—	6	—	—	6 $\frac{3}{4}$	—	—	6 $\frac{3}{4}$	—	—	5 $\frac{1}{2}$			
Rice „	—	—	4 $\frac{1}{2}$	—	—	4 $\frac{1}{2}$	—	—	4 $\frac{1}{2}$	—	—	5			
Coffee „	—	1	2	—	1	3	—	1	2 $\frac{1}{4}$	—	1	3 $\frac{1}{2}$			
Tea „	—	3	10	—	3	10	—	3	8	—	4	1 $\frac{1}{2}$			
Sugar „	—	—	4 $\frac{1}{2}$	—	—	4 $\frac{1}{2}$	—	—	4 $\frac{1}{2}$	—	—	4 $\frac{1}{2}$			
Salt, per cwt.	—	14	11	—	12	4	—	—	—	—	14	7			
Wine (Cape), per bot.	—	2	8	—	3	—	—	2	10	—	3	—			
Brandy, per bottle	—	5	3	—	5	2	—	5	5	—	5	7 $\frac{1}{2}$			
Beer „	—	2	—	—	1	10	—	1	11	—	2	—			
Tobacco, per lb.	—	3	3	—	3	3	—	3	3	—	2	7 $\frac{3}{4}$			

E.—Prices of Colonial Produce in Natal, 1859-66.

Description of Produce.	Prices of Native Produce.*															
	1859.				1860.				1861.				1862.			
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Wheatp. muid	27	0—50	0		27	0—	40	0	25	0—33	3		30	0—	40	0
Indian corn „	4	0—	8	3	6	0—	30	0	10	0—28	4		5	0—	11	4
„ ground „	7	0—14	6		10	0—	35	0	21	0—30	4		8	0—	19	0
Kafir corn „		—				—			8	0—25	0		5	0—	10	0
Oats	12	0—20	0		15	0—	25	0	15	3—24	0		15	0—	30	0
Barley	10	0—15	0		15	0—	24	0	12	0—20	0		12	0—	25	0
Beans	18	0—20	6		20	0—	27	0	17	6—27	6		16	0—	21	8
Buckwheat „	12	0—			18	0—	20	0	10	0—22	6		10	0—	24	0
Potatoes, com- mon, per muid }	7	0—15	0		10	0—	20	0	10	0—20	0		10	0—	20	0
Potatoes, sweet, per muid..... }	3	9—	7	0	4	0—	10	0	6	0—15	0		4	8—	12	0
Sugarp. cwt.	24	9—35	0		25	0—	32	0	28	0—34	0		25	0—	50	0
Coffeeper lb.	1	0—			1	0—	1	3	0	11—	1	0	1	0—	1	6
Rice „	0	3—			40	0—	per muid		30	0—			30	0—	37	6
Arrowroot, p. cwt.	37	0—37	6		30	0—	35	0	30	0—40	0		30	0—	35	0
Dried fruit, p. muid	40	0—80	0		40	0—	60	0	20	0—40	0		20	0—	120	0
Woolper lb.	1	0—	1	4	1	0—	1	3	0	10—	1	1½	0	10—	1	6
Cotton „		—			0	1½—				—			0	6—		
Oathay, p. 1,000lbs	45	0—90	0		45	0—	100	0	40	0—75	0		50	0—	75	0
Tobaccoper lb.		—			1	0—	2	0	1	0—	3	0	2	6—	6	0

Description of Produce.	Prices of Colonial Produce—Contd.															
	1863.				1864.				1865.				1866.			
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Wheat ... p. muid	29	9—42	6		26	9—	50	0	12	8—	35	0	20	0—	35	0
Indian corn „	3	6—11	6		8	0—	20	0	10	0—	20	0	7	6—	40	0
„ ground „	10	0—17	6		10	0—	27	6	12	8—	27	6	7	0—	50	0
Kafir corn „	4	6—12	0		4	6—	16	0	10	0—	21	0	5	0—	16	8
Oats	15	0—25	0		13	9—	30	0	19	0—	30	0	15	0—	27	0
Barley	7	4—15	0		10	0—	20	0	15	0—	20	0	14	8—	16	4
Beans	10	0—29	0		10	0—	25	0	10	0—	25	0	12	0—	20	0
Buckwheat „	11	4—20	0		12	6—	20	0	12	6—	15	0	14	0—	18	3
Potatoes, com- mon, per muid }	10	8—20	0		12	0—	20	0	12	0—	20	0	6	0—	20	0
Potatoes, sweet, per muid..... }	4	0—12	0		5	0—	10	0	4	2—	8	0	3	8—	12	0
Sugarp. cwt.	15	0—46	0		17	0—	46	0	20	0—	50	0	18	0—	30	0
Coffeeper lb.	1	0—	1	5	0	11—	1	6	0	9¼—	1	6	0	10—	1	6
Ricep. muid	28	0—55	0		28	0—	52	0	25	0—	37	0	*30	0—	75	0
Arrowroot, p. cwt.	38	0—67	6		30	0—	67	6	30	0—	40	0	25	0—	38	4
Dried fruit, p. muid		—			†0	6½—	40	0	†0	6½—	75	0	†0	3—	0	7¾
Woolper lb.	0	10—	1	0	0	10—	1	0	0	5—	1	3	0	7—	1	1
Cotton „	0	6—	1	6	0	5½—	2	0	0	4—	1	8	0	3—	1	3
Oathay, p. 1,000lbs	47	6—70	0		47	6—	105	0	47	6—	105	0	35	0—	120	0
Tobaccoper lb.	1	0—	2	9	1	3—	5	0	0	7½—	4	6	0	9—	4	0

Note.—A muid is a sack of three imperial bushels capacity.

* Per bag.

† Per lb.

On the RISE, PROGRESS, and FUTURE PROSPECTS of TEA CULTIVATION in BRITISH INDIA. By CHARLES HENRY FIELDER, ESQ., Secretary to the Lower and Northern Assam Tea Companies, and Honorary Secretary to the Indian Tea Planters' Association.

[Read before the Statistical Society, 15th December, 1868.]

THE plant *Thea*, which is a shrub, nearly allied to the genus *Camellia*, and from which the tea of commerce is manufactured, has been cultivated by the Chinese since about the year A.D. 350, and was discovered by Bruce in or about the year 1823 growing in the forests of Assam; but whether the plant or trees found were indigenous to the soil, or were the remains of cultivation carried on by the former inhabitants of the country, is a point on which there are many differences of opinion.

The plants discovered by Bruce, and those since cultivated in British India are merely varieties of the same species as those cultivated in China, and if left to their natural growth, attain a height of from 20 to 40 feet, with numerous branches; the main trunk attains a diameter of from 10 to 20 inches, and the lateral branches from 1 to 4 inches; but in a state of cultivation it is kept down, by judicious pruning, to a height of from 3 to 5 feet. The leaves are lanceolate, and attain, when full grown, a length of from 5 to 9 inches.

The green and black teas of commerce are made from the same plant, the difference arising solely from the difference in the manufacture. The green tea being made direct from the green leaf, while the black is allowed to wither by exposure to the sun, or hot air, before manufacture.

The tea plant appears to flourish best in a sub-tropical climate, *i.e.*, in China, in N. lat. 24° to 35°, and British India in N. lat. 25° to 28°, and requires, in addition to most excellent soil, a very large average rainfall, and a comparatively high temperature.

The first gardens opened out and planted in British India were those in the northern part of the valley of Assam, under the orders of the then Government of India, and under the immediate supervision of the late Generals Jenkins and Vetch, the former of whom was commissioner of the province. These experimental gardens, formed of the tea trees found thereon, and cleared of the other forest trees and jungles surrounding them, were sown, wherever

vacancies required filling up, with the seed from the trees growing. This took place in 1834-35, and in 1835 the Government appointed a superintendent of tea forests. Subsequently, in 1839-40, the bulk of these gardens were made over by the Government to "The Assam Company," who, with varied success, have continued and extended the cultivation of the tea plant in this and other parts of the valley of Assam.

About the close of the administration of the late Lord Dalhousie, very liberal rules were issued under which the waste lands of Bengal and the annexed provinces might be acquired, and these greatly stimulated the extension of tea cultivation in British India. They were as follows:—

In Assam and Cachar there were *one-fourth of grant rent free for ever*, as allowance for making roads, &c. The remainder *rent free for fifteen years*; next ten years $4\frac{1}{2}d.$ per acre per annum; next seventy-four years $6d.$ per acre per annum; and afterwards it was liable to reassessment at a moderate rate, not exceeding that ruling then for other lands not permanently settled.

The difficulties found, however, in strictly complying with the rules, in reference to bringing under cultivation certain proportions of the total acreage of the lands granted within the prescribed periods, induced the Government of Lord Canning, in October, 1861, on the representations of the planters, to promulgate the resolutions or rules known as "Lord Canning's," whereby planters holding under the old, or "Lord Dalhousie's," rules, might commute their holdings into a fee simple or freehold, on payment of certain amounts per acre, ranging from 2 rupees 8 annas (*i.e.*, 5*s.*) upwards, according to the dates of the original grants; and when existing planters or others desired to acquire from that date waste lands, the price was fixed at 5*s.* per acre, possession being given on a payment of 10 per cent. into the local courts, the remainder of the purchase money remaining, if wished, at 10 per cent. per annum interest, payable within ten years. These rules were not sanctioned by the Secretary for India. The rules now in existence, sanctioned by the Government of Bengal, are modifications of the above, but the lands are put up to auction, if not held under previous grants or certificates of possession.

The facilities thus granted by the Government, not only stimulated the cultivation of tea in British India legitimately, but unfortunately introduced a class of speculators, who acquired vast tracts of the best lands suitable for tea cultivation, and who proceeded to clear and plant, as fast as possible, large areas of the lands acquired with a view to immediate sale, at prices which were then ruling (100*l.* per acre for land under tea in good cultivation, being about the average), owing to the success of the Assam

Company and others, the non-competition for labour, and the prices paid for seed by the new planters.

The sale of a large proportion of these gardens, which were formed with *local labour* at a comparatively small cost, at rates which (admitting the gardens were fairly good) precluded remunerative results on the amounts paid for them in the face of an active competition for the existing local labour, and the enormous amount of labour required to be imported, and consequent thereon the great increase in the price of provisions, &c., as well as the influx (as managers of these estates) of inexperienced persons, owing to the sudden expansion of tea cultivation, has undoubtedly, combined with a lavish expenditure, in bringing the tea interests of British India to the verge of ruin—if not of extinction. Happily to a great extent these evils have been mitigated, and by a report issued lately of “The Commissioners appointed to Inquire into the “State and Prospects of Tea Cultivation in Assam, Cachar, and “Sylhet,” in accordance with the resolution of the Government of Bengal, dated November, 1867, it appears that after a careful and lengthened investigation and taking evidence on the spot, they came to the conclusion, *vide* p. 14 of their report, that—

“*On the whole, we see no reason to believe that, as far as soil and “climate go, tea cannot be grown profitably in Assam, Cachar, and “Sylhet. The whole matter may be reduced to the one question “of the supply of labour. If this can be obtained in sufficient “quantity, and at reasonable cost, GARDENS PROPERLY PLANTED AND “ECONOMICALLY MANAGED, OUGHT TO RETURN A FAIR PROFIT ON THE “OUTLAY.”*

It may be fairly stated, that no crop is more dependent on an adequate supply of labour than tea. Until the trees have become fit to pick leaf from, it requires at least *one man to each two acres* for clearing, hoeing, and planting; afterwards one man to the acre as a minimum; for in addition to keeping the ground clear of jungle, the leaf picking, when a flush is out, employs every hand, and the leaf, if neglected for even forty-eight hours, becomes unfit for the manufacture of the higher qualities of tea—such as flowery pekoe, pekoe, and souchong. The labour question, therefore, in the words of the “Tea Commissioners of 1868,” is the sole question to look to in the future, and the following data will show approximately the present position.

Area and Population.

An approximate idea of the lands actually at the disposal of the Government of India, *i.e.*, 1859-60, in districts suitable to the cultivation of the tea plant, may be gathered from imperfect state-

ments in possession of Government (none of the lands having been surveyed), which are as follows :—

	Acres.
In four districts of Assam there were over ...	6,000,000
„ Dargeeling	250,000
„ Cachar	200,000

of these about 546,000 acres have been taken up, and 46,000 brought under tea cultivation.*

The area of Assam in 1854 was stated as follows :—

Under General Cultivation, Square Miles.		Square Miles.	Population.
562	Kamroop.....	3,345	387,775
276	Nowgong.....	8,712	241,300
346	Durring	2,844	185,569
256	Seebasghur	5,440	159,573
134	Luckimpore	9,900	85,296
677	Gowalparah	4,104	141,638
		34,345	1,201,151

The total stated by Colonel Vetch before the House of Commons was about 1,000,000, and this agrees with Captain Butler’s figures, as Assam proper is generally reckoned without Gowalparah; this was in 1858-59.

In 1866-67 the population had increased to about 1,750,000.

The large importation of labour into Assam, Cachar, and Sylhet, began in 1863, as the following table shows :—

	From May, 1863, to January, 1868.			
	Coolies Embarked.	Mortality during Voyage.	Percentage of Deaths.	Duration of Voyage.
Assam	54,352	1,712	3·14	1 month
Cachar	52,155	2,456	4·70	„
Sylhet	2,473	82	3·31	2 weeks

These high death-rates were caused by cholera, overcrowding, and a bad selection of emigrants; where a careful supervision has been exercised in the recruiting, losses by deaths on the voyage are the exception.

The average rate of wages *per month* in Assam was from 2 rupees 8 annas (*i.e.*, 5s.), to 3 rupees (6s.), previous to 1857.

In 1859 the wages rose to 4 rupees per month, for labour, and since that to 7 and 8 rupees per month, through competition.

* *Vide* Captain Butler.

The principal articles consumed by the coolies of Assam are rice, vegetables, and fish.

In 1856-57, the price of dhan, *i.e.*, rice in the husk, was about 1 rupee, or 2s. for eight maunds, or 640 lbs.

In 1862-63 it had risen to 1 rupee for two maunds, or 160 lbs., and since that the rate per maund has increased to 2 and 3 rupees.

The revenue in 1852-53 amounted to 750,000 rupees, or 75,000*l.*, while in 1864-65 it had reached a total of 2,630,000 rupees, or 263,000*l.*, over 100,000*l.* of which was from land and forest revenue, while 150,000*l.* was received from excise and stamps, and thereby mainly (*i.e.*, to the extent of 143,500*l.*) from the sale of opium to the labouring population, to the frightful extent of the use of this pernicious drug may be attributed the indolence and degeneracy of the bulk of the inhabitants of the valley of Assam. The increase in the quantity sold, and the revenue obtained thereby, has been as follows:—

	Sold.	Revenue.
	lbs.	£
1859-60	32,720	21,400
'64-65	155,200	143,500

and it has considerably increased since.

Under the following heads I shall proceed to show what is the now admitted conclusions arrived at, by the most practical planters, after the experiences obtained.

First. What a garden ought to cost per acre, up to the time the produce will cover the expenses?

Second. The annual outlay, per acre, thereon afterwards, to keep it in good cultivation, and to manufacture the produce?

Third. The reasonable out turn of tea per acre that may be expected?

Fourth. What average price per pound may be reasonably calculated upon?

In considering the first question, it will depend greatly upon the terms on which the planter acquired the land, *i.e.*, whether at the upset price of 2 rupees 8 annas (or 5s.), or at higher prices, as much as 40 rupees (or 4*l.*) per acre having been given during the mania, and through competition for the waste land; next, whether he has cumbered himself with an extent of land far beyond the area he intends to cultivate, which has been the general rule hitherto, under the idea that it would keep out competitors. Assuming, however, that the land cost only 5s. per acre, and a certain amount of local labour is obtainable, and that the requisite number of

imported coolies can be obtained at 50 rupees, or 5*l.* per head, and that the rate of wages paid to each adult does not exceed 6 rupees per month, *i.e.*, 12*s.*, then the average cost per acre will not be less than 500 rupees, or 50*l.* for opening out and keeping it in proper cultivation until the returns are sufficient to meet the working expenses.

The principal expenses are, *first year* :—

Purchase of grant.

Importing labour.

Buildings and implements.

Stock and keep thereof.

European and native establishments.

Wages of coolies, for clearance of forest and jungle, and subsequently staking, sowing, and hoeing land cleared, say eight times.

Purchase of seed.

Making of nurseries for transplanting into vacancies.

General expenses, exchange, &c.,

and may be calculated at 20*l.* per acre.

In the second and third years the items would differ but little, except in the first, and that only imported labour would be required to fill up vacancies occasioned by deaths, absconders, &c., say 10 per cent. The expenditure per annum would be, say, 15*l.* per acre.

Annual Outlay thereafter per Acre on Factories.

This, at present rates and appliances, according to the most reliable sources, cannot be taken under *nine pounds per acre for cultivation expenses*, which include the following :—

European and native establishment.

Imported labour.

Wages of coolies for, say nine hoeings.

Buildings and repairs.

Stock and keep, general expenses, &c.

To this must be added, *say from 1*l.* 10*s.* to 2*l.*, for manufacturing, i.e., for plucking, rolling, firing, sorting, implements, materials, packing, &c.*

The cost, therefore, of the produce from each acre of land under cultivation, should be, *on leaving the factory, from 10*l.* 10*s.* to 11*l.**

The average cost hitherto of freight, insurance, landing charges, commission, brokerage, &c., from dispatch of teas from factories to sale, has been 1*l.* 10*s.* to 1*l.* 15*l.* per chest or maund.

The general opinion is, that a garden that can give an average of four chests, or maunds of 80 lbs. each per acre, say 320 lbs. of manufactured tea per acre, is a good one; there are many gardens undoubtedly in British India, that have given, over an extensive

area of cultivation, much more than this average, but they are at present exceptions; a safe average may be taken at three chests or 240 lbs.; and as each chest or maund of tea manufactured, takes on an average four maunds or 320 lbs. of the green leaf as gathered to produce same, it will be seen that even with double the average crop, the return of green leaf per acre would only amount to 1,920 lbs., or less than one ton, which ought to be considered a very moderate result for crops that are gathered in on an average fifteen times per annum. The out turn per acre will again depend—

On the nature and quality of the soil.

The locality of the garden in reference to aspect and average rainfall.

The variety of plant cultivated.

The *distances* the plants were originally staked or planted out apart, and more especially on the amount of *labour* available.

Indeed this latter, although named last, is the *one question* (in the language of the commissioners) that the future production of tea in British India depends upon; the amount of out turn per acre on good lands, and where the trees are of the Assam variety, may truly be said to depend on the labour available to work them. Gardens have been known to yield six, seven, and even nine maunds of 80 lbs. each of manufactured tea, or from 480 lbs. to 720 lbs. per acre. One adult to each acre under tea cultivation, is considered the lowest amount of labour that a garden can be kept in a state of moderate cultivation with.

The soil most preferred is a clayey but sandy loam, wherein the tap root can easily penetrate. That which is found to retain the greatest moisture should be selected, combined with natural drainage, therefore the undulating slopes of hills, where extensive belts of forest exist, are preferred.

A site that has water carriage is undoubtedly the best, if combined with the before-mentioned advantages, as the belts of forest on hills are well known as conducive to rainfall.

The statistics available are very meagre, but it may be stated that the average rainfall is from 70 to 100 inches in Upper Assam, and 60 to 90 inches in Lower Assam.

The variety most advisable to cultivate is from *indigenous* or true Assam seed; that called the *China*, introduced by Fortune into the Himalayas and Upper Assam, not yielding at, and after full growth is attained, so much leaf per acre, nor is the strength and flavour equal to the Assam. A variety called the *hybrid* was in great favour for some time, but it has been found to relapse more into the "China" character after some years' growth, and more especially in the seed obtained therefrom.

The distances apart varies extremely, viz., from 6 feet by 6 feet

to 3 feet by 3 feet, and is regulated greatly by the nature of the soil and the description or variety of plant to be grown.

Average Price to be Obtained per Pound.

The prices ruling for Indian teas for many years, owing to the small quantities produced and the strength and general good quality, were high compared with China teas.

It appears from Government returns from 1851 to 1859, the *imports* were as follows, against which is shown, for the same time, the production of the Assam Company, and the prices they realised NETT, viz.:—

Date.	Imports.	Sold by Assam Company as Crop of Year.	Average Price per Pound.	
	lbs.	lbs.	s.	d.
31st December, 1851.....	262,839	253,000	1	8½
„ '52.....	310,198	271,427	1	11½
„ '53.....	270,776	366,687	1	11
„ '54.....	386,221	478,258	1	11
„ '55.....	408,858	558,628	1	10½
„ '56.....	690,390	638,789	1	11⅔
„ '57.....	1,240,254	707,101	1	8⅓
„ '58.....	909,513	770,432	1	11½
„ '59.....	1,304,932	810,680	1	8

Since 1860, when the imports exceeded one million pounds, more attention has been paid to Indian tea; and records of the *imports, deliveries out of bond, and stocks* on hand have been kept, they are as follows, and the average sales and prices obtained by the Assam Company appended:—

Date.	Imports.	Deliveries.	Stock.	Sold by Assam Company as Crop of Year.	Average Price per Pound.	
	lbs.	lbs.	lbs.	lbs.	s.	d.
1860....	1,113,000	1,036,000	800,000	880,154	1	7¼
'61....	1,520,000	1,292,000	1,028,000	933,850	1	10⅓
'62....	1,761,000	1,681,000	959,000	1,092,513	2	2⅔
'63....	2,563,000	2,257,000	1,270,000	1,165,052	2	— ¹ / ₁₆
'64....	3,285,000	2,781,000	1,783,000	1,146,652	2	— ¹ / ₁₆
'65....	2,510,000	2,923,000	1,290,000	942,877	1	7⅔
'66....	5,148,000	4,377,000	2,062,000	653,211	1	9
'67....	7,084,000	6,223,000	2,863,000	765,320	1	9¼
'68....	813,300	7,320,000	3,691,000	940,000	Only half sold	

The average price therefore to be looked for may be taken at 1s. 9d. to 1s. 10d. per lb.

There was also *afloat*, on 30th November, 1868, 2,196,428 lbs.,

against 1,846,600 lbs. same date last year of Indian teas from Calcutta.

There are records of *thirty-eight* joint stock companies engaged in Indian tea production.

Their *nominal capital* amounts to nearly *four millions and a-half* sterling.

Their *subscribed capital* is about *three millions and three-quarters* sterling, and that *called up* amounts to *three millions*.

The above statistics do not include a number of companies in course of liquidation.

The number of private planters is estimated at two hundred, but the want of reliable Government statistics on the foregoing points, is one of the chief reasons for laying this imperfect *résumé* of the rise and progress of tea cultivation in British India before your Society.

In conclusion, it must be admitted that the future of tea cultivation in British India must depend greatly on the action of the Government of Bengal in relation to labour, and it is to be believed that they are now fully alive to the importance of fostering, instead of obstructing, the cultivation of the tea plant. Considering the amount of capital engaged in its development, and the revenue derived from what was a few years ago mere waste land, it is trusted that the recommendations of the committee appointed on the tea cultivation of India will be carried out, and the competition between the Government engineers making roads, &c., and the planters cease. The Government import the labour they require for their works, and the rate of wages has become nearly reduced to that formerly ruling in Lower Assam. The planters in the upper provinces have only to abandon the senseless competition hitherto existing, to benefit likewise. The employment of machinery for manufacture of the tea and the cultivation of the soil, together with rigid economy in the expenditure, is now being generally introduced and enforced, and the cultivation in British India ought, for the future, at present rates, to yield remunerative results on the capital employed.

The Governor-General's agent (*vide* letter to Government of Bengal, No. 118, of 11th November, 1859), stated that the quantity of waste land taken up *in 1859, in Assam alone*, was capable of producing 30,000,000 lbs., and he stated that if well cultivated, each acre would give six maunds, or 480 lbs. of tea and upwards.

On the COST and ORGANIZATION of the CIVIL SERVICE. By HORACE MANN, ESQ., Barrister-at-Law, of Lincoln's Inn, Registrar of the Civil Service Commission.

[Read before the Statistical Society, Tuesday, 16th February, 1869.]

CONTENTS:

	PAGE		PAGE
I.—The Objects attained by the Increase in the Civil Service Estimates	41	II.—The Organization of the Civil Service	48

THE demand for retrenchment in the public expenditure is at present directed mainly against the great military services; but enough has been already said, both in and out of Parliament, to show that the estimates for civil services will not escape the assaults of economical reformers. The large amount (more than 15,000,000*l.*) expended under this head, and the great increase which this amount shows over the sum voted by Parliament under the same head in 1848, when the total was 3,670,427*l.*, and in 1858, when the total was 11,844,166*l.*, cannot fail to strike attention, and, by suggesting extravagance, provoke attack. This, in the public interest, is to be welcomed; but the experience of former movements of the same kind should teach us that whether any benefit shall accrue to the public from the efforts of the economists will depend upon the judiciousness or otherwise of their criticisms and demands. Efforts equally earnest have utterly failed in consequence of the revulsion of opinion which ensued, when it was found that the facts had been misapprehended, and that the remedies proposed were rough and inconsiderate. It is with the hope of aiding to promote a true economy in at least a portion of the civil service, that I have endeavoured in this paper to contribute something towards supplying more influential critics with that indispensable preliminary to all successful action—an accurate acquaintance with the facts of the case.

Starting, then, with the figures which represent the total “Estimates” for civil services in the three decennial periods mentioned, viz.:—

	£
1848-49	3,670,427
'58-59 [.....	11,844,166
'68-69	15,169,369*

it may be useful to show what has been the real, as distinguished from the apparent, increase. For though this distinction is, of course, familiar to those who are accustomed to deal with the "Estimates," the public is not unfrequently led astray by arguments against extravagant expenditure which imply that the whole difference of 11,498,942*l.*, between the estimate for 1848-49 and that for 1868-69, represents so much additional money spent by the Government out of the general taxation; whereas a great deal of expenditure under heads common to both periods has been included in the "Estimates" of the latter period and excluded from those of the former. For instance; in 1848-49, the entire cost of collecting the revenue, amounting to 4,108,481*l.*, was paid out of the growing produce of the taxes in its progress to the exchequer. Similarly, the expenses of the law courts, and of other departments in which fees were received, were paid out of such fees whenever there was a surplus, and only charged upon the estimates when there was a deficiency, and then only to the extent of the deficiency. Again: the expenses of a number of departments, such as the Audit Office, General Register Office, &c., did not appear in the estimates, because they were charged, by act of Parliament, upon the Consolidated Fund. Yet again: a considerable portion of the expenditure formerly borne by local taxation—as that incurred in respect of prosecutions, local constabulary, &c.—has been thrown upon the general taxation, and goes to swell the later estimates. The amounts, under some of these heads, I have not yet been able satisfactorily to ascertain; nor do I pledge myself to minute accuracy with regard to the others; but the following statement will, I believe, be useful, and sufficiently correct for the present purpose:—

* It may be as well to state, in order to avoid misapprehension, that this 15,169,369*l.* does not represent the entire amount of taxation appropriated to civil services. It is the sum now voted by Parliament for this purpose; but there is still a considerable amount which does not appear in this form; as, for example, the salaries and pensions of the judges, which, for obvious and adequate reasons, are charged upon the Consolidated Fund, and the whole expenses of the diplomatic service, which, for less intelligible reasons, are equally withdrawn from the annual scrutiny of Parliament. There is also the cost of the civil departments connected with the army and navy, which is borne upon the army and navy estimates. The entire cost of the civil service, including these items, may be stated at 16,828,849*l.* It will, however, be sufficient for the present purpose merely to allude to this additional expenditure; limiting the scope of this paper to sums now covered by the yearly votes.

Sources from which certain Expenditure now Charged on the Civil Service Estimates, was formerly Defrayed.	Amount in each of the undermentioned Financial Years.	
	1848-49.	1858-59.
<i>Growing Revenue, viz.:—</i>	£	£
Cost of collection	4,128,481	—
Other charges.....	356,850	—
Consolidated Fund	1,006,117	4,478
Navy estimates	840,734	988,488
Fees.....	?	?
Local rates	?	?
Total (upwards of)	6,332,182	992,966

Before, therefore, a fair comparison can be made between these years and 1868-69, the sum of 6,332,182*l.* must be added to the estimate for 1848-49, and the sum of 992,966*l.* must be added to the estimate for 1858-59; besides, in each case, a considerable sum on account of expenses then defrayed by fees and by local rates. As I have not yet, however, been able to satisfy myself as to the exact amounts under these heads, it seems best to give the totals without any addition on this account; bearing in mind that the sums ascribed to the two earlier periods will, in consequence, appear smaller, by some hundreds of thousands of pounds, than was actually the case.* With this qualification the comparison between these periods will be as follows:—

	£
1848-49	10,002,609
'58-59	12,837,132
'68-69	15,169,369

The real increase, therefore, in the amount of public money devoted to objects for which the civil service estimates now provide has been somewhat less than—

	£
Between 1848 and 1858	2,834,523
„ '58 „ '68	2,332,237
„ '48 „ '68	5,166,760

Or, perhaps we may say, with a tolerable approach to accuracy, that the increase in the last twenty years is, in round numbers, somewhat less than 5,000,000*l.*† Or, the comparison may be put

* The amount borne upon the estimates for 1868-69 for the expenses of departments formerly supported out of fees, is 799,181*l.* The amount in the case of expenses formerly charged upon local rates, I have not been able with sufficient accuracy to compute.

† This is the *net* increase, after allowing for the amount saved by the abolition of some departments and the reorganization of others; an amount by no means

in another way. Thus, supposing that the expenditure for civil services were now defrayed from the same sources as those from which it was defrayed, or from which it may be assumed that it would, if then existing, have been defrayed, in 1848, the total of the estimates for civil services at these two periods (taking, roughly, the sum chargeable on local rates at the low figure of 150,000*l.*) would stand nearly as follows:—

	£
1848	3,670,427
'68	6,301,547

So that, but for the transfer of charges from one fund to another, the estimates for the current year would have only shown an increase of 2,631,120*l.* over those of 1848. Of course, the real addition to the public burdens would be about twice this amount; and it is on many accounts better that the actual extent of these burdens should be fully known; but this will serve to show how needful it is to look beneath the surface of a comparative statement, such as that which places the 15,169,369*l.* of the present estimates alongside of the 3,670,427*l.* of the estimates of twenty years ago.

Taking, then, 1848 and 1868 as the two years for comparison, and accepting 5,000,000*l.* as the amount of increased expenditure in the twenty years—the next point for consideration is, what has the nation obtained in exchange for this additional outlay? For, of course, the question whether this expenditure is excessive, and whether retrenchment is possible, must depend upon the question whether the objects for which this outlay has been incurred are sufficiently valuable and such as the nation is determined to attain. If they are, the only other question is, whether the same advantages could be obtained for the country at a lower rate. In other words, we may inquire (I) are the results worth having? and (II) if so, can the machinery for producing them be cheapened?

I.—The Objects Attained by the Increase in the Civil Service Estimates.

In the first place, as to the value of the results for the sake of which the country has thus augmented the burden of taxation, the following list will show in what particular class of expenditure (according to the not very satisfactory grouping adopted by the Treasury) the increase has chiefly occurred; the assignment of the items to one class or another being governed by the practice prevailing in 1868:—*

unimportant as proving the tendency towards economy, but not so great as to affect the argument of the paper.

* The increase, in some of the first seven classes, has been somewhat larger, and that in the revenue departments somewhat smaller, than is here represented, on account of postage charged differently in the different years. This, however does not affect the total.

Class, in the "Estimates."	Aggregate Increase.	Diminution.	Net Increase.
	£	£	£
I. Public works and buildings	817,697	159,775	657,922
II. Salaries and expenses of public departments	490,181	108,433	381,748
III. Law and justice	1,813,557	80,603	1,732,954
IV. Education, science and art	1,161,490	9,928	1,151,562
V. Colonial, consular, and other foreign services	167,198	107,288	59,910
VI. Superannuations (exclusive of revenue departments) and charitable gratuities	265,656	49,329	216,327
VII. Miscellaneous, special, and temporary objects	95,280	122,686	[dec.] 27,406
— Revenue departments	1,459,531	465,788	993,743
Total	6,270,590	1,103,830	5,166,760

A few observations on this list will suffice to explain what, more particularly, this increased expenditure represents.

1. Large as is the increased outlay on public works and buildings, my impression is, that the objects upon which it has been expended—public offices, art galleries, parks, and pleasure gardens—have been demanded by the country; and not only so, but that this demand will continue and even necessitate a further increase. It must be remembered, too, that the application of money to the erection or enlargement of Government offices partakes of the nature of an investment, by which a permanent substantial property is acquired, and by which an ultimate saving may be realised. It would have been true economy to have laid out, years ago, large sums upon the acquisition of the ground now wanted for this purpose. The single item of "Rent of buildings hired for official "purposes" amounts now to upwards of 30,000*l.* per annum, and must of course increase with the rise in rents generally. But, however this may be, there seems no room to doubt that—what with new Law Courts, new National Gallery, new and concentrated offices for the transaction of the public business—there is a great increase of work to be done under this head, and that the public wants to have it done. Some of the principal items in the current estimates are—

	£
Royal parks and pleasure gardens	137,524
Public offices	231,411
Maintenance, &c., of public buildings	117,905
Buildings for art, science, and education	167,000
Embassy houses, &c.	75,055
Houses of Parliament	84,336
Public buildings in Ireland	149,259
Piers, harbours, and lighthouses	167,485
	<u>1,129,975</u>

It may be worth while to point out that a portion of the estimate (36,252*l.*) represents the amount paid for rates on Government property; an item which did not appear in the accounts for the earlier years.

2. The second class consists of all the ordinary home departments, excluding the legal and educational offices, the three revenue departments (customs, inland revenue, and post office), and the civil branches of the army and navy. The increase here (490,181*l.* in the aggregate, and 381,748*l.* after giving credit for reductions in this class), will be found to have been caused in great measure by the creation of new departments, or new branches of old departments, to carry out measures demanded by the public. Amongst these, the following may be included, as having been either wholly formed or practically developed since 1848:—

	Amount of Estimate in 1868-69, or Increase over Estimate, &c. of 1848.
	£
Charity Commission	18,438
General Register Office, Ireland	18,306
Agricultural statistics (Great Britain)	14,500
Public health (Privy Council)	13,000
Factory inspection.....	12,356
Inspection of coal mines	10,500
Civil Service Commission.....	9,407
Inspectors and Commissioners of Fisheries	8,182
Cattle plague	7,743
Public Record Office.....	7,903
General Register Office, Scotland	7,608
Lunacy Commission, „ „	6,206
Inspection of constabulary	4,425
Public Record Office, Ireland	4,296
Inspection of alkali works	3,300
„ „ prisons	2,400
„ „ reformatories	2,305
„ „ lime juice	2,000
Registration of designs	1,896
Local Government Act Office	1,223
Inspection of burial grounds	1,120
„ „ anchors and cables	1,100
„ „ oyster fisheries	500
	<hr/>
	158,714

Other cases of the kind no doubt exist, though not mentioned separately in the estimates. Deducting the expenses of the above offices from the total increase under Class II, there would remain a residue of 331,467*l.*, which may perhaps represent, nearly enough, the additional cost of transacting the ordinary business of the

departments, with such new duties as are performed, not by separate branches but by the general staff of each office.

Considering the enormous growth of the country during the last twenty years, in population and wealth, the consequent immense expansion of its general business, and the tendency to throw more and more upon the central authority, it can hardly be questioned that the amount of work done in nearly every office must have very greatly increased—probably in greater proportion than the expenditure has increased. Take, for example, the following items in this class, amounting in the aggregate to 208,556*l.*—

	Increase since 1848.
	£
Poor Law Boards (United Kingdom).....	85,317
Printing and stationery	83,239
Offices of Woods and Works	40,000

That there should be a greatly increased outlay for the administration of the poor laws can surprise no one who recollects what additional measures, requiring work from the superintending offices, have been urged upon Government from time to time. The increase in the Office of Works is explainable in the same way. The amount of printing and stationery is of course governed by the amount of business generally, and must increase when that increases. The only other augmentations demanding notice are sums of 52,604*l.* in the House of Commons offices and of 31,671*l.* in the Patent Office; the chief expenses of these two departments having, in 1848, been defrayed out of fees.

3. The largest increase in any class is that under the head of "Law and Justice" (1,813,557*l.* in the aggregate, and 1,732,954*l.* after allowing for savings). The greater part of this, however, is more apparent than real; representing not fresh charges, but a transfer of burdens from one fund to another. Thus, certain charges, amounting to 539,377*l.*, are for prosecutions, prisons, and police, the greater part of which was formerly paid for out of local rates; while other charges, amounting to 755,623*l.*, relate to expenses of various law courts, which used to be defrayed out of fees. The only difference is that whereas, formerly, the expenses were first paid out of fees and the surplus, if any, handed over to the Exchequer—so that nothing appeared on the estimates unless there was a deficiency of fees—now the estimates are charged with the whole expenses, and the Exchequer receives the entire amount of the fees. Putting aside these two groups of items, amounting apparently to about 1,200,000*l.*, the aggregate increase in Class III, is reduced to about 600,000*l.*, in the departments, &c., provided for out of the general taxation in 1848. Of this amount 94,838*l.* is attributable to the London metropolitan police; 34,323*l.* to law

charges and criminal prosecutions in Ireland; 58,988*l.* to the Dublin metropolitan police; and 325,286*l.* to the Irish constabulary; making together 513,435*l.* Whether there is much chance of a demand on the part of the public for diminished protection of the kind procured by this expenditure, is a question upon which no reader of the newspapers is likely to have any doubt.

4. Under the head of "Education, Science, and Art," there has been a gross increase, since 1848, of 1,161,490*l.* It is not difficult to decide whether the object to be attained by this expenditure is one upon which the community has set its heart; and it will be time enough to discuss the chances of a diminution when any one can be found who does not expect a still further increase. It may, perhaps, be possible to effect some small economies, and to relieve (though this appears to me unlikely) the general, at the expense of local, taxation; but that by means of one fund or the other, or both, a much larger amount of educational work will, sooner or later, have to be done, is becoming every day more obvious.

5. Under "Colonial, Consular, and other Foreign Services," the chief increase has been on account of the services in China, Japan, and Siam (66,215*l.*); for consuls (47,988*l.*); and the extraordinary expenses of ministers at foreign courts (36,314*l.*). On the other hand, there has been a saving on the grants to the colonies and on some other items; so that on balancing increase against diminution, the net increase is not more than 59,910*l.*

6. "Superannuations" speak for themselves. Excluding the revenue departments and the charitable gratuities, there is an increase in the pensions of the mass of civil departments of 178,667*l.*; and there can be no doubt that the obligations on this account will continue to increase from year to year, for some time yet to come. Opinions may vary as to the terms upon which pensions should be granted, if bestowed at all; but the whole question was thoroughly considered by a Royal Commission, in 1858, and in consequence of its report, the present system was deliberately established by act of Parliament in 1859.

Passing over Class VII, which, after the items have been distributed to accord with the classification adopted in 1868, shows an absolute net decrease of 27,406*l.*, but which gives no other occasion for remark, there remain the revenue departments (customs, inland revenue, and post office). In these, taken together, there has been an increase of 1,459,531*l.* in the aggregate, and of 993,743*l.* after setting-off a decrease of 465,788*l.* The increase will, upon analysis, be found to belong principally to the post office; being, in fact, only a part of a much larger increase in that department. For, if we compare the respective amounts now charged on the estimates of these three departments with the amounts charged in 1848, upon

the revenue in course of collection, and on the navy estimates for the packet service, the comparison will stand as under :—

Department.	1848.	1868.	Difference.	Increase or Decrease.
	£	£	£	
Customs	1,490,441	1,024,653	465,788	Decrease
Inland revenue	1,413,050	1,574,210	161,160	Increase
Post office	2,160,213	3,458,584	1,298,371	„
Total	5,063,704	6,057,447	993,743	Increase

This can hardly be regarded as unsatisfactory. It may be possible to effect still further savings in the customs and inland revenue departments by legislative and administrative changes; but as to the increase of 5,000,000*l.* in the total estimates for civil services, it seems fair to assume that these two departments have not contributed unduly towards that augmentation. On the other hand, the increase of nearly 1,300,000*l.* in the post office is of course due to the immense and notorious increase in its ordinary business, and to the special addition to its ordinary business of the Savings Bank and Insurance branches. Even if this enlargement of its operations did not involve, as it does, an augmented income, we may, I think, conclude that the public fully approves the extension of postal facilities and the other measures on account of which this increased expense has been incurred.

To sum up this part of my subject, it appears that since 1848 the general taxation of the country has been called upon to defray, on account of such services as are now included in the civil service estimates, additional charges to the amount of 6,270,590*l.*; and that, during the same period, it has been relieved of charges to the amount of 1,103,830*l.*, leaving a net increase of 5,166,760*l.*, of which, however, a certain portion, is not an addition to the public burdens, as it was, in 1848, paid by the public in the shape of fees and local rates. It further appears that 5,686,487*l.* of the additional charge is accounted for by the undermentioned items :—

	£
Public works and buildings	817,697
Law and justice.....	1,813,557
Public education, science and art, &c.	1,161,490
Post office	1,298,371
Inland revenue	161,160
Superannuations	265,656
Poor law boards.....	85,317
Printing and stationery	83,239
	<hr/>
	5,686,487

This brief account will, I hope, at least assist an inquirer to judge whether, so far as regards the purposes intended to be served by this outlay, much or any of the public money is wasted in the pursuit of unnecessary or unremunerative objects; and I think the conclusion generally drawn from these facts will be, that the greater portion, if not the whole, of the additional burdens on these estimates during the past twenty years, has been imposed for purposes which the public desired, and still desires, to effect. This may, of course, be an erroneous supposition; and, if so, the path of the economist is clear. If the public is inclined now to give up the various advantages which have been obtained in return for this additional expenditure; if we should be content with fewer public improvements, less police protection, fewer sanitary safeguards, a harsher poor law, fewer and dearer courts of justice, fewer postal facilities, and fewer and less useful schools for three-fourths of the community,—then it will be easy enough to reduce the civil service estimates by abolishing several departments and attenuating others. But if the public really wants the things for which it, and not the departments, has been crying out, it can get them only by paying for them. My own belief, if I may express it, is that, so far from reducing its demands for improvements by means of the State-machinery, the public, under the new *régime*, will considerably increase them; and that the civil service estimates will be called upon to provide for a much larger quantity of work than that which is now paid for from this source. In saying this, I am saying nothing as to the army and navy, and by no means disputing the possibility of a large reduction in that quarter; but with regard to strictly civil purposes, I very much doubt whether, when the new constituencies shall have realised their position and power, they will be intent upon reducing the public expenditure at the cost of limiting the public enterprises; whether, for example, they will be eager to forego the benefits of a really national system of education, in order to relieve the payers of income tax by 1*d.* or 2*d.* in the pound. And this is only one object out of many about which they are equally solicitous. But, however this may be, unless some of the objects now pursued shall no longer be desired, the only question for economists is, whether they can be obtained for less money; and, of course, if I am right in predicting a considerable augmentation of expenditure, it becomes all the more necessary to see that what is spent is spent to the best advantage. In other words, if the nation insists upon having more and more of the produce of the Government machinery, and yet grudges the present price, the only inquiry worth making is—whether the cost of production can be lessened. And this brings me to the second part of my subject, viz., the Organization of the Civil Service.

II.—*The Organization of the Civil Service.**

As a general rule, when the pressure of taxation becomes more than usually inconvenient, some Member of Parliament proposes to relieve the taxpayer by the summary process of striking off 10 or 20 per cent. from the salaries of all civil servants. No surer means could be devised for preventing desirable and possible reforms. Just such a movement, ending in just such a result, occurred in 1691, when Parliament was reasonably excited by abuses frightful enough to make the hair of a modern reformer stand on end. "Unfortunately however," says Macaulay,† "no member rose at this conjuncture to propose that the civil establishments of the kingdom should be carefully revised. * * * Those who were loudest in clamouring against the prevailing abuses were utterly destitute of the qualities necessary for the work of reform. On the 12th of December, some foolish man, whose name has not come down to us, moved that no person employed in any civil office (the speaker, judges, and ambassadors excepted), should receive more than 500*l.* a-year; and this motion was not only carried, but carried without one dissentient voice. * * * Such absurdity," continues Macaulay, "must have shocked, in his cooler moments, even the roughest and plainest foxhunter in the House. The consequence was that a reaction took place. * * * After a few weeks, the senseless plan, which had been approved without a division, was rejected without a division, and the subject was not again mentioned. Thus, a grievance so scandalous that none of those who profited by it dared to defend it, was perpetuated merely by the imbecility and intemperance of those who attacked it."

Happily, with the present ministry and the present House of Commons, such rough and ready plans of indiscriminate retrenchment are not likely to find favour: but, of course, there are degrees of injudiciousness; and the warning conveyed by this piece of history may not be altogether superfluous. The project of assigning, arbitrarily, to each department a certain gross sum, without

* I should explain that this part of my paper deals with the entire Civil Service, and not merely with the portion provided for by the "Civil Service Estimates." To the amount of those estimates (15,169,369*l.*) must therefore be added 869,793*l.*, the charge for the administration of the army and navy (including some charges for clerks in the purely military branches), and 789,687*l.* for civil services charged upon the consolidated fund, making altogether 16,828,849*l.* Of this total 10,637,696*l.* may, it would seem, be accepted as the cost of *administration*; and, of this latter amount, the sum of 6,755,611*l.* represents the charge for *salaries* (excluding the payments to workmen, women, and persons not wholly employed). The salaries of clerks and officers holding similar and superior positions (excluding, however, political and professional officers), amount to 3,445,223*l.*, divided amongst 15,520 persons.

† "History of England," vol. iv, p. 121.

reference to the work expected in return, is analogous to the proposal of the unknown member in 1691; and some other recent suggestions are about equally just and politic. A considerable economy may, I believe, be effected in the civil service, but this can scarcely be done by a *coup de main*, nor, if efficiency is to be regarded, without careful inquiry and continuous effort. One way in which, I venture to think, both efficiency and economy may be at the same time promoted, I now propose to explain; premising that although the title of this section of the paper is somewhat ambitious, I do not propose to discuss, under the head of "Organization of the Civil Service," more than a comparatively small part of that question; confining my remarks and suggestions almost exclusively to what may be called, for want of better means of distinction, the *clerical* portion of the civil service, numbering about 16,700 persons, and constituting (with heads of departments, principal or "staff" officers, clerks, and professional officers) about 15 per cent. of the entire force. The remaining 85 per cent. consists almost wholly of persons in the following ranks:—

	Per Cent.	Total Number (about)
Servants; office keepers, messengers, &c. (mainly in-door)	2·0	2,049
Customs officers, letter carriers, prison warders, police, &c.	37·7	40,626
Artisans and tradesmen	28·3	30,500*
Persons only partially employed	14·1	15,200*
Residue	2·5	2,700*
	84·6	91,075

* The numbers of these classes are assumed as being the same as in 1860 ("Report, Civil Service Appointments," p. 362), with an addition for law offices, not then included.

The expenditure upon these classes, it is evident, can hardly be lessened except by a reduction in their number; as the current rate of wages for similar labour in the open market leaves little, if any, margin for reduced remuneration per man. As to the possibility of a numerical reduction, especially in the civil departments connected with the army and navy (which are included in the above statement), I cannot presume to offer an opinion; but it must be borne in mind that there are several circumstances which must cause an increase in other directions; as, *e.g.* the acquisition by the Government of the electric telegraphs; and this is probably only the first in a series of such transfers. I will only further add, as to the organization of the inferior force, that if Sir Charles Trevelyan's

plan for the reconstruction of the army, by means of shortened service, should be carried out, there seems to be no reason why nearly all the inferior posts, except those occupied by skilled mechanics, should not be reserved (under proper regulations as to proof of comparative fitness) for soldiers discharged with a good character on the expiration of their term of military service. This would not, however, lead, nor does Sir C. Trevelyan design it to lead, to any reduction in the rate of pay.

Passing now from these classes, and confining attention to persons occupying clerkships and similar or superior positions, the number of whom is 16,736, the following statement, showing the amount of money appropriated in salaries to these persons in 1868, may serve as a basis for discussion :—*

Description of Officers.	Number.	Salaries.	
		Aggregate.	Average per Man.
		£	£
Political	35	103,625	2,960
Professional (various grades)	1,173	974,832	831
Superior (not political)	1,801	921,550	512
General body of clerks, and others ranking } with clerks: including the following, viz., }	13,727	2,523,673	184
<i>Supplementary clerks, copying clerks, writers, }</i> <i>military clerks, &c.</i> }	985	108,718	110
<i>Excise officers</i>	3,664	521,745	142
<i>Post office provincial clerks</i>	985	87,331	89
<i>Prison clerks</i>	102	11,118	109
<i>Ordinary clerks with low pay, and obviously }</i> <i>occupying an inferior position</i>	271	34,552	127
Total	16,736	4,523,680	270

* The assignment of persons to one or another of these classes is necessarily somewhat arbitrary, and opinions may differ as to sundry cases. I may state, however, that for the figures in this part of my paper I am much indebted to my friend Mr. Humphreys, of the Civil Service Commission, who has bestowed considerable attention upon this subject, and in whose accuracy and judgment, in these and similar investigations, I have the utmost confidence. The numbers differ, as will be seen, from those contained in my paper read at Norwich, which referred to the year 1860; while those now given are the result of a fresh analysis, and refer to 1868. From the present numbers have been excluded those of the consular and diplomatic services, as well as of the commissariat, military store, and some other services of the army which, though formerly civilian, are now military. The object of the present paper, too, has made it desirable to exclude from the calculation many other appointments which were before included. I may add, that the term "clerk" is employed to cover all who, whatever their designation, are in the essential respects of work and remuneration, in the same category as clerks. It seemed, on the whole, preferable thus to classify according to facts than according to names.

Upon the first two of these classes I do not now propose to touch, further than to suggest that, if increased economy is possible here, it must be obtained rather by reduction of numbers than of individual salary. Putting aside the political offices and some others which are generally filled by strangers to the service, the average salary assigned to the situations which form the *prizes* for the permanent civil service is by no means extravagant as compared with the private services and with the kind and amount of ability which the higher situations demand. Without unduly pressing the argument, it may be fairly urged that those who fill responsible positions in the service of the crown, should be able to associate on equal terms with the moderately successful men in the open professions or in commerce, and with gentlemen of independent means. It is, however, sufficiently notorious that, what with the prodigious increase in the number and wealth of the persons belonging to these classes, on the one hand, and what with the rapid rise of prices on the other hand, the civil servant, as the holder of a fixed income, has lost very greatly in relative position to most of the other classes of the community. His income is not worth so much as it was, and his equals in station are both richer and more numerous than before. It would be amusing, if it were not melancholy (from a civilian point of view), to notice the complete inversion which has taken place, in this respect, since 1691, when, says Macaulay,* “the enormous gains, direct and indirect, of the “servants of the public went on increasing, while the gains of “everybody else were diminishing. Rents were falling, trade was “languishing: every one who lived either on what his ancestors “had left him, or on the fruits of his own industry, was forced to “retrench. The placeman alone thrived amidst the general distress. “‘Look,’ cried the incensed squires, ‘at the Comptroller of “‘Customs! Ten years ago he walked and we rode. Our incomes “‘have been curtailed, and his salary has been doubled: we have “‘sold our horses: he has bought them: and now we go on foot “‘and are splashed by his coach and six.’” Times have certainly changed since 1691. At present the number of civil servants who could afford to keep a carriage out of their official income may doubtless be counted on the fingers; while every tradesman, doing but a moderate business, daily retires to his suburban villa, and raises, against unfortunate civilians, the rent of houses, the price of meat, and the rate of servants’ wages.

The foregoing table shows that the average salary of the 1,801 persons constituting the superior class, and holding most of the prizes of the permanent Civil Service, is 512*l.* per annum. Another

* “History,” vol. iv, p. 121.

view of the prospects of the civil servant may be obtained from the following figures, referring to the 10,685 persons, of or above the rank of clerks, included in Class II of the Estimates and in the revenue departments:—

Maximum Amount of Annual Salary.		Number of Persons Receiving each Amount.	Percentage of the Total Number Eligible.
£	£		
Above 600 and not exceeding 700	700	96	·90
„ 700 „ 800	800	65	·61
„ 800 „ 900	900	14	·13
„ 900 „ 1,000	1,000	41	·38
„ 1,000 „ 1,200	1,200	10	·09
„ 1,200 „ 1,500	1,500	6	·06
„ 1,500		2	·02
Total		234	2·19

In addition to these, there are, indeed, 109 appointments, neither political nor professional, with salaries amounting in the aggregate to 112,519*l.*; but they are generally bestowed, for sundry reasons, upon persons not previously connected with the service, and cannot, therefore, be taken into account in this comparison.

I would by no means be understood as suggesting that more places should be provided than the work requires, or that more pay should be given than the work deserves. But it should be recollected that, in a promotion-service, you cannot have good men at the top unless you have, first, good men at the bottom of the class from which selections are made; and that whatever force may belong to Sydney Smith's advocacy of prizes, as a means of attracting ability, his argument applies no less to the civil than to the ecclesiastical service. It must also be borne in mind that the higher salaries are seldom enjoyed until their possessors are advanced in life, after having worked for years at lower rates.

Perhaps it may be supposed, from the tenor of what precedes, that the drift of this paper is not towards economy. Such a supposition would, however, be erroneous; for in reality, before retrenchments can be properly made, it is advisable to know in what direction they cannot be made. Having, therefore, put aside (1) the idea of saving much money by giving up any of the *objects* for which it is now expended, and (2) the idea of reducing the average remuneration for intellectual labour; my next position is that for much of the work done by the 13,727 persons at present included under the head of “clerks” or corresponding designations, the Government pays an excessive price. For the fact is, that while there is a considerable amount of work in the public offices

upon which talents and culture of the highest order would not be thrown away, there is, on the other hand, a large quantity of work which is either mechanical in its nature or virtually mechanical to any one after slight instruction and brief experience. The exact amount of such work could, of course, be ascertained only by actual inspection of each office; but, taking all the offices together, it is not, perhaps, hazardous to assume that as much as three-fourths of the whole work performed is of this simple character. Now, what I venture to assert is, that the lower description of this mechanical work, such as simple copying, sorting and arranging papers, filling up forms, &c., can be very efficiently performed by boys of 14 or 15 years of age, paid at the rate of from 12s. to 15s. per week; and that the higher description of this mechanical work, such as making entries in books, indexing, keeping ordinary accounts, writing letters from precedents, checking the mechanical work of others, &c., can be thoroughly well done by young men recruited from the class which furnishes teachers to our national and British schools, and paid by salaries commencing at 50*l.* or 60*l.* per annum, and rarely exceeding a maximum of 150*l.* a-year. There is no doubt that the millions of money bestowed by the Government for the purpose of assisting popular education, have considerably increased the knowledge, and aptitude for official work, of the class which has received it; and there seems no good reason why the State should not now reap some return for its expenditure, by obtaining the cheaper labour which it has thus rendered effective.

These views, except as to the introduction of boy-power and the low rate of remuneration, are not novel. The separation of mechanical from intellectual labour (adopting, for want of better, terms which indicate, rather than describe, what is meant) has often been contemplated. It was recommended in the well-known report of Sir Charles Trevelyan and Sir Stafford Northcote on the "Reorganization of the Civil Service" (1853), in the evidence given, on behalf of the Civil Service Commissioners, before the Select Committee on Civil Service Appointments (May, 1860),* and again in June, 1860, in the report of a committee appointed by the Treasury, and comprising Sir Stafford Northcote, the Registrar-General, Mr. Lingen, &c.† Sundry abortive efforts, also, have from time to time been made in some departments to establish this distinction; and some few experiments of the kind are now in course of trial. The existing state of things, in this respect, will be understood from the following figures:—

* See "Appendix to Report of the Committee," p. 377.

† Parliamentary Paper, No. 251, Sess. 1865.

Designation.	Number.	Salary.			
		Minimum.	Maximum.	Aggregate.	Average.
		£	£	£	£
Established clerks* and others below staff officers	7,720	80	1,000	1,760,209	228
Supplementary clerks, copying clerks, &c.	263	80	500	38,660	147
Writers (Admiralty, Customs, and War Office).....	498	91	191	48,802	97†
Military clerks (War Office, &c.)	139	—	—	11,986	86
Temporary clerks in Board of Trade and its branches	85	78	150	9,270	109
Other clerks with low rates of pay, and obviously occupy- ing an inferior position	271	—	—	34,552	127

* Excluding excise officers, post office provincial clerks, convict service clerks.

† This being a recently-formed class, the average rate of pay has not yet been nearly reached. The numbers are, in part, estimates only.

From this it appears that the existing supplementary, or mechanical class constitutes less than one-seventh of the clerical force, after excluding staff officers on the one hand and provincial and prison clerks on the other; and that the average salary of the class is 114*l.* per annum. It is obvious, therefore, that the copying and other mechanical work of the departments is still in the main performed by persons highly paid for this kind of labour; and, if we seek for the cause of this, we shall not, I think, have very far to go. Remarks were made last session, in the House of Commons, implying that the system of competitive examination was in some degree answerable for the circumstance that young men of the wrong sort—too well-connected and too well-educated for the situations—obtained appointments as the result of competition, and were then found to be discontented and above their work. But, in point of fact, all that the examinations at present do is to select from candidates nominated by patrons: and if the patron, when a mere mechanical clerkship falls vacant, sends for examination three candidates who are all sons of gentlemen, it can hardly be the fault of competition if the one selected should belong to this undesirable rank. If the competition were open instead of close—free to the thousands of industrious and competent young men of the lower social grades, instead of restricted to the nominees of Government and the Legislature—there would be no difficulty in filling all these situations with able and hard-working men, by whom the salary, which appears so small to those who have “to keep up appearances,” would be regarded as quite adequate to their more modest requirements. Indeed, the competitions might, if it were thought neces-

sary, be absolutely restricted to men of the proper class; and, for my own part, I see no objection to a rule making good social position a positive disqualification for the mechanical employments. This, however, may very likely be regarded as a zeal for reform pushed to fanaticism; and the object in view might perhaps be sufficiently attained by following the practice of the Civil Service Commissioners, who, in the case of the open competitions for such posts in their own office (the examination for which is wholly in essential and practical subjects), give express notice that such clerkships "are designed for a different class of persons from those who fill the ordinary clerkships in the civil service," and that "no prospect of promotion in this office, or of increased remuneration, is held out to applicants."

The supply of this kind of labour, if resort were had to the open market, may be inferred from the following statistics, though the salary was somewhat higher than that now proposed:—

1. An open competition for eight writerships in the India Office, in 1858, was attended by 339 candidates.

2. An open competition for four copying clerkships in the Probate Court Registry, in 1866, was attended by 52 candidates.

3. An open competition for a supplementary clerkship in the University of London, held in 1868, was attended by 86 candidates.

4. Five open competitions for supplementary clerkships have been held by the Civil Service Commissioners, the number of candidates having been 237 for 11 situations.

But, if open competition is the only effectual means of selecting the right sort of men for mechanical, and the right sort for intellectual, labour, it is equally essential for the purpose of maintaining this distinction after it has been introduced. As already stated, isolated attempts, in individual departments, have at various times been made to provide an inferior order of mechanical assistants; but some, at least, of these efforts have already failed, because, the patrons having appointed well-connected young men to the lower grade, these naturally forced their way into the higher rank, and their rise involved the rise of all the rest and the virtual abolition of the lower class. This, it is evident, is just the result which may be expected to follow, sooner or later, all such experiments, if patronage, in any shape, is to control the original selections, and if the arrangement is to be merely departmental—subject to the varying views and constant good nature of changing official chiefs, instead of general—not to be touched in part unless it is touched as a whole. It is not, therefore, I think, too much to say that a suitable inferior force can only be established and preserved, (1) by a general regulation issued under proper sanctions and applying to the service as a whole; (2) by an invariable resort

under proper conditions, to the open labour-market for recruits ; and (3) by a resolute adherence to comparatively low rates of pay. The Treasury Committee, referred to above, felt so strongly the danger to which any classification of this kind would be exposed, if worked departmentally, that they recommended that the mechanical workers should constitute an entirely separate body, separately voted in the “ Estimates ;” the individuals being liable to be shifted about from one office to another as the amount of work might fluctuate, or as other circumstances might require.

Supposing, then, that such a force is desirable, what would be the effect upon the number, classification, and remuneration of the service from this point upwards ? As I have said already, the extent of any change in this direction can only be settled after minute investigation, by competent authority, into the circumstances of each office. It is chiefly, therefore, for the purpose of illustration that I venture to put forward the following statement of the proportion which the several orders of civil servants might perhaps bear to each other ; taking 100 as representing the total number of situations to which the readjustment might apply ; viz., the number in the above table, after deducting one-tenth from the established clerkships, in order to allow for exceptional cases in which somewhat special qualifications may be necessary, or in which locality or other circumstances may render it difficult to include them in a general plan.

Grade.	Number (per Cent.).		Proposed Scale of Remuneration.	
	Present.	Future.	Minimum.	Maximum.
1. <i>Superior class</i> (corresponding with the existing “ established clerks ” and the persons in similar positions)	84·7	25	£ ?	£ ?
2. <i>Auxiliary class</i> (corresponding with the existing “ writers,” “ copyists,” “ indexers,” “ extra clerks,” &c.)	15·3	75	31	300
Total	100	100	—	—
<i>Subdivision of the Auxiliary Class—</i>				
(a) Men	15·5	{ 5 45	200 50	300 150
(b) Boys	—	25	12s. p. week	15s. p. week

The necessary limits of this paper will not allow any elaborate explanation or defence of this scheme. As to the superior class, it

is only requisite for the present purpose to fix the proportion which this class should bear to the others, without entering on the question of salaries. It seems reasonable, however, to suppose that ten or a dozen scales of remuneration would suffice for nearly all the differences which exist between the various situations requiring intellectual ability, and might, in process of time, be substituted with advantage for the multitude of scales which now exist without apparent reason—upwards of one hundred having been provided (as was shown in a former paper) for “established clerks” alone.

This, however, is not essential to the establishment of the other grades. The process would be, that the lower positions in the present body of established clerks would, as they became vacant, not be filled up—an addition being made instead to the ranks of the subordinate force. Admission to the superior class should only be obtainable by examination of a somewhat high order; varying, however, according to the nature of the higher work in each department. A few schemes would probably suffice for this purpose, instead of the eighty-eight schemes which are prescribed by the departments under existing regulations. The auxiliary grade of mechanical assistants, including the boy-writers, should be selected by an examination framed to test mainly their practical aptitude. All these examinations should be by open competition, which is only another term for a free labour-market, and which, as the Civil Service Commissioners state, in their last report, is equally appropriate, whether the test be high or low—restricted to the single point of handwriting, or ranging over an entire university course. It would also be essential that no *promotion* should be possible from one rank to another, except in the case of rare merit, and then only by some special process, such as a formal minute of the Treasury issued after personal inquiry by that board; but the door to the higher situations should be open to any one who could enter it by the usual path of competition. The boys should be liable to dismissal at short notice, and should be actually discharged on arriving at the age of 19 or 20, unless, as is most probable, they had, before this time, either found their way by competition into the higher division of the auxiliary class, or provided for themselves in the private services. The men might either be permanent, with a title to retiring pensions, or if it should be thought desirable (which I much doubt), and possible, to keep off the pension list those who, under whatever designation, do the permanent work of the Government, this might be effected with these men at least as easily as it could be effected with men selected under any form of patronage. Of course, as the word “men” includes women, there is nothing in this scheme inconsistent with the employment of females in such

situations as may be suitable for them, should it be thought advisable to follow the example of America in this respect.

To a possible objection, that the dismissal of well-conducted boys at the expiration of their short term of service would be a harsh proceeding, it may be sufficient to reply (1) that there can be no harshness in carrying out the terms of a bargain well-understood beforehand; and (2) that, as a matter of fact, the scheme would exactly suit the circumstances of a large number of parents who are obliged to withdraw their boys from school at 14 or 15 years of age, and who would gladly accept any occupation for them during the next few years. It would very seldom happen that an industrious boy, making good use of the abundant spare time at his disposal, could fail to obtain employment as remunerative as any which he would have obtained had he spent these years in idleness or in any other occupation. It seems but right to add, as my justification, in part, for putting forward my views on this subject, that I have seen this plan in practical operation, for some years past, in the office of the Civil Service Commissioners, by whom, indeed, the organization of distinct classes for mechanical and intellectual labour has been carried into effect ever since the formation of the Board in 1855.

The advantages of the proposed reorganization would be three-fold: (1) the bulk of the Government work would be better done; (2) it would be done by fewer hands; and (3) it would be done for less money. With respect to this last point, I am quite aware how little value can be attached in general to estimates of the pecuniary results of such readjustments. The change itself could not be effected all at once, nor even gradually without a good deal of labour and difficulty. If the immediate displacement of persons were large, a large addition in pensions and compensations must, if precedent is to be followed, be set off against the saving in salaries. If, therefore, I offer an estimate of the money-value of the change, it is with hesitation, and only to afford some idea of the ultimate advantage to be gained in this respect. Even as to this, it is not desirable to exaggerate the effect of the scheme. It is only upon a portion of the force above enumerated under the head of "clerks" that it could operate; for in the case of certain large classes, as excise officers, post office provincial clerks, and clerks in the convict service, the plan recommended is virtually carried out—the men being generally selected from the proper social rank, and paid at a rate not widely differing from that suggested. The residue, however, to whom the scheme would apply is large enough to make the consequent saving sufficient to justify the change, apart from other advantages which would, I believe, attend upon a simpler organization of the service. If my assumption can be accepted, that the proportion

between the two grades, though differing, of course, in different offices, should be, in the aggregate, 25 and 75, as given above, the comparison, as to cost, would be as follows—making no allowance for reduction in the total numbers consequent upon the higher efficiency of the new force, nor for any revision of the salaries of the residue:—

Grade.	Numbers.		Estimated Aggregate Remuneration.		Difference of Cost.
	Under the Present Plan.	Under the Proposed Plan.	Under the Present Plan.	Under the Proposed Plan.	
I. <i>Superior Class</i>	6,948	2,051	£ 1,584,188	£ 849,638	£ 734,550 dec.
II. <i>Auxiliary Class—</i>					
(a) Men	1,256	4,102	143,270	471,730	328,460 inc.
(b) Boys	*	2,051	*	71,990	71,990 „
Total	8,204	8,204	1,727,458	1,393,358	334,100 dec.

* A few boys are now employed in some departments, but the precise number is not ascertainable, and is so small that the class can hardly be said to exist at present.

The calculations in this table are made on the assumption that the 4,897 officers of the superior class who would be replaced by clerks of the auxiliary class would be receiving, on the average, 150*l.* per annum, and that the auxiliary class would, on the average, be receiving the mean of their respective scales of pay. This would of course result, if nothing more were done, in a considerable increase of the average payment to the members of the upper class. If this should be avoided and the reduction of that class should take place uniformly through all the grades, instead of at the bottom alone, the saving would amount to 716,066*l.* As some increase, however, of their average salary would be only reasonable, seeing that the average difficulty of their work would be increased, the real saving would be something between these two sums.

In conclusion (as I fear I have exceeded the proper limit of time), I would repeat that I do not offer this estimate as giving anything more than a rough indication of the extent to which the proposed plan might operate upon the civil service estimates; and I am quite sensible of the uncertainty of the ground upon which the calculation is based. It will be seen that the amount to be saved is not considerable in comparison with the total expenditure; nor is the portion of the civil service here subjected to reorganization extensive in proportion to the entire service. The saving, however, is at all

events large enough to repay the trouble of obtaining it; and I have purposely narrowed the scope of my survey, partly because this portion of the field appeared to supply the best, if not the only, material for statistical treatment, and partly because it seemed to be at least sufficiently extensive for a single paper. The larger questions which remain will doubtless meet with due attention from other and more competent hands.

I will only add, further, two remarks, to guard against possible misapprehensions: (1) that the plan above advocated is not, as I have endeavoured to explain, put forward as being universally, but as being generally, applicable; and (2) that it is not put forward as representing any opinions but those of the writer.

On the AGRICULTURAL STATISTICS of the UNITED KINGDOM (SECOND PAPER). By JAMES CAIRD, ESQ.

CONTENTS:

	PAGE		PAGE
I.—Estimate and Result of Crop, 1867	61	XI.—Distinctive Features of Husbandry	70
II.—Wheat Crop, 1868	62	XII.—Feeble Yield of France Explained.....	71
III.—Price and Supply	63	XIII.—Irish Agriculture	72
IV.—Steady Decline in the Price of Wheat under Free Trade	64	XIV.—No Recent Reduction in Small Holdings	72
V.—Increasing Rate of Consumption likely to be fully supplied	65	XV.—Distress mainly Confined to One-eighth of Land in Hands of Smallest Occupiers	73
VI.—General Results	67	XVI.—The English Agricultural Labourer	75
VII.—Increase of Cattle and Sheep	68	XVII.—Great Change in proportion of the People Dependent on Agriculture	75
VIII.—Foreign Dairy Produce not Increasing	69	XVIII.—Home Grown Sugar.....	76
IX.—Large, Compared with Moderate Sized, Farms ..	69	XIX.—Return of Horses Desirable	77
X.—Proportions under Bare Fallow	70		

HAVING been invited by the Council to continue the subject of the agricultural statistics of the United Kingdom, on which I read a paper in March last year, I propose first to consider the result of the estimates then offered of the previous crop, the probable yield of the last crop (1868), and the great public advantage which followed the early announcement contained in the summary of the returns.

I.—Estimate and Result of Crop, 1867.

It will be remembered that I then offered an estimate of the result of the bad wheat crop of 1867, in which, after making deductions for the diminished consumption likely to be caused by high prices, I computed the foreign supply required within the harvest year at 9,600,000 qrs. The actual receipts have been 9,609,006 qrs., between August, 1867, and August, 1868, the date at which the new crop was ready.

But the harvest was a very early one, and the condition of the corn so good that it was available for immediate use. The harvest year, as generally and properly understood, and within which it is very desirable that the statistical tables should be framed, is from

1st September to 1st September. Between these dates last year the total imports of wheat and flour were 9,293,000 qrs.

On either basis it will appear that my estimate was not very wide of the mark, though it was severely handled at the time, and figures were put forth to show that considerably less than two million quarters was all we could possibly receive between that time and harvest. The price, which had begun to droop, was thus again strengthened, and maintained during April, May, and part of June, when the final fall began, and steadily continued till the beginning of September, by which time the drop from the highest point had reached 20s. a quarter. But in the meantime the pressure on the poor, as was partly shown by the statistics of outdoor relief, was unnecessarily prolonged, while it was found that the foreign supply, which had been represented to have been exhausted by the enormous imports of the first six months of the harvest year, continued with very little diminution to its close. Instead of the 1,000,000 or 2,000,000 qrs., which was the utmost we were led to expect from all sources, we actually received 4,500,000 qrs. in the second half of the harvest year.

The economy in the use of bread caused by the high price of last year has proved very close to the estimate I ventured to put forth. It will, perhaps, be remembered that I assumed every 10 per cent. of additional price on the crop would diminish the consumption by 1 per cent.; and as bread had risen 50 per cent., I reckoned the saving at 5 per cent., or a little over 1,000,000 qrs. on the total consumption. The actual saving is shown by the following figures:—

	Qrs.	Qrs.
Average annual consumption since 1862, } inclusive of seed	—	20,800,000
Seed, $2\frac{1}{4}$ bushels per acre }	1,100,000	
Foreign wheat imported	9,300,000	
Home crop, 9,700,000 qrs. of 59 lb. quality, } equal to 61 lb. quality	9,380,000	
	—————	19,780,000
Saving by economy in the use of bread		<u>1,020,000</u>

This bears out the opinion of eminent statisticians, that the consumption of bread is very constant: that whatever the price may be, everything must be given up before bread—for the very severe pinch of an increase of price of fully one-half diminished the use of it by only one-twentieth.

II.—*Wheat Crop, 1868.*

The bountiful harvest of 1868, and the splendid condition in which it was saved rendering it fit for immediate consumption, was

a great relief to the country after the pinching caused by two bad harvests and diminished trade. If there had been only the greater acreable produce to rely on much would have been gained; but a great deal more than that was revealed by the publication of a summary of the agricultural returns on 19th September. The beneficent season had added 2,000,000 qrs. to the produce of an average crop, while the increased acreage under wheat swelled that addition by 1,200,000 qrs. more. Nor was this all; for the fine and heavy sample will improve the yield and quality of the flour by 2 or 3 lbs. a bushel, or equal to one twenty-fifth part of the total produce.

The contrast between the yield of the two last harvests, 1867 and 1868, is shown in a very striking manner when all the figures are placed together.

Years.	Acres under Wheat.	Quality. Weight per Bushel.	Total Produce at 488 lbs. per Quarter.
1867	3,640,000	lbs. 59	Qrs. 9,380,000
'68	3,951,000	63	16,436,000
Increase in 1868.....	—	—	7,056,000

Here is a difference in a single year, exceeding four months', or one-third of the total consumption. The home crop will give us within 5,100,000 qrs. of our average consumption, and if we add to that one month in consequence of the unusually early harvest, and reckon on 13 months' consumption before the next harvest may be available, we shall need 6,800,000 qrs. of foreign wheat and flour. In the six months since 1st September last we have imported about two-thirds of that quantity, so that, even if imports should for the current six months materially decrease, we are likely to receive quite enough to carry us on with moderate prices till next harvest.

III.—*Price and Supply.*

The price is a question of great delicacy, though of first importance. In the course of the year 1868 the highest average Gazette price was in May, 73s. 8d., and the lowest in December, 50s. 1d.; the difference 23s. 7d. There is thus a fall of one-third from the highest point, which corresponds in most remarkable exactness with the increased produce of 1868 over 1867. So far as our own crop is concerned, the consumer would thus appear to have got the full benefit of the good wheat harvest.

Till next harvest the price will very much depend on the rate of foreign imports. These come to us not so much in relation to price

in this country as to the productiveness of the harvest abroad. A scarcity here and high prices will draw the surplus corn from every quarter of the globe to us, but it will not cease to flow when the source of supply is abundant, however low the price may fall in this country. It is an axiom in political economy that no article can remain long below the cost of production. But that cost is very different in different countries. In this country the cost of producing wheat may be taken at the maximum. In other countries where rent, rates, or wages are greatly lower than ours, and especially where, as in Southern Russia and the valley of the Mississippi, there are likewise boundless tracts of most fertile soil, they can continue to produce wheat at prices which would entail loss on the grower in England. Moreover the vast machinery of production, once set in motion, will maintain its momentum for a considerable period after the stimulus has been withdrawn. Thus in 1860, in consequence of two deficient harvests, the price rose 10s. a quarter, and the imports increased one-third over those of 1859. They continued to swell in volume until 1863, the year of abundance, when the price fell 10s. a quarter. The imports did not then decline in the same proportion; indeed but for the disturbance of the American trade, caused by the war, there would have been no decline, and if we exclude America for that reason, and limit ourselves to Russia and Germany, which between them have furnished us with 40 per cent. of our imports since the Crimean War, I find that during 1863, 1864, and 1865, when the average price varied between 40s. and 44s., the imports continued at much the same rate as in the two preceding years, when the price was 55s.

A very productive harvest in France will exercise an immediate influence on prices in this country. Not only does her demand for foreign corn cease, but from the small average yield and the vast acreage under wheat a slight increase in the produce tells quickly up. Last year I computed an increase of one bushel on the acre in France at upwards of 2,000,000 qrs. If her increase has been in anything like the same ratio as ours, France will have a large surplus for export, probably quite enough to meet any decline caused by the deficient crop in Southern Russia.

IV.—*Steady Decline in the Price of Wheat under Free Trade.*

The effect of free trade in corn has been to lower the price of wheat in this country, notwithstanding the increase of the population and consequent increased consumption. The average price of the twenty years preceding 1848 was 57s. 4d., and of the twenty years of free trade, 52s. 3d. But if the disturbing influences of the cessation of supplies from Russia during the Crimean War, and from America during the later years and since the close of the

American War, be eliminated, the average price of the last twenty years would have stood 10s. lower than that of the twenty years preceding free trade.

This is a fact of great importance when we come to consider the increasing population of the country, and the means we have of meeting their annually growing demands upon our resources. The popular estimate of the wheat annually consumed by each person of the community in England used to be 8 bushels. In 1850 I ventured to question that opinion. My estimates then showed that it did not probably from our own soil exceed 5 bushels. Mr. Lawes has lately entered on an investigation of this subject, the first part of which he has embodied in a very able paper in the last number of the "Royal Agricultural Society's Journal." He divides the last sixteen years into two periods of eight years each, and the results of his estimates are embraced in the following summary:—

Estimated Consumption of Wheat per Head per Annum.

During the Last Sixteen Years.	England and Wales.	Scotland.	Great Britain.	Ireland.	United Kingdom.
	Bushel.	Bushel.	Bushel.	Bushel.	Bushel.
First eight years	5·9	4·2	5·7	2·7	5·1
Second „	6·3	4·2	6·0	3·3	5·5
Average of whole period....	6·1	4·2	5·9	3·0	5·3

Converting these figures into pounds, it appears that during the first eight years each person consumed at the rate of 311 lbs. of wheat, and during the last period, 335 lbs. But the proportions in which that was afforded by foreign supply had also altered from 79 lbs. per head in the first, to 134 lbs. in the second. Here two very important results are shown; first, that the people are able to buy, and do consume more bread; and second, that we must depend wholly on foreign countries for the increased supply necessary to meet the growing consumption.

An immense impetus seems to have been given to consumption by the general increase of wages consequent on the Crimean war and the Indian mutiny, and the great exertions put forth by this country on these occasions. The foreign imports of wheat, which up to 1860 had not exceeded an annual average of 4,500,000 qrs., then rose to 10,000,000, and during the last eight years have maintained an annual average of 8,000,000 qrs.

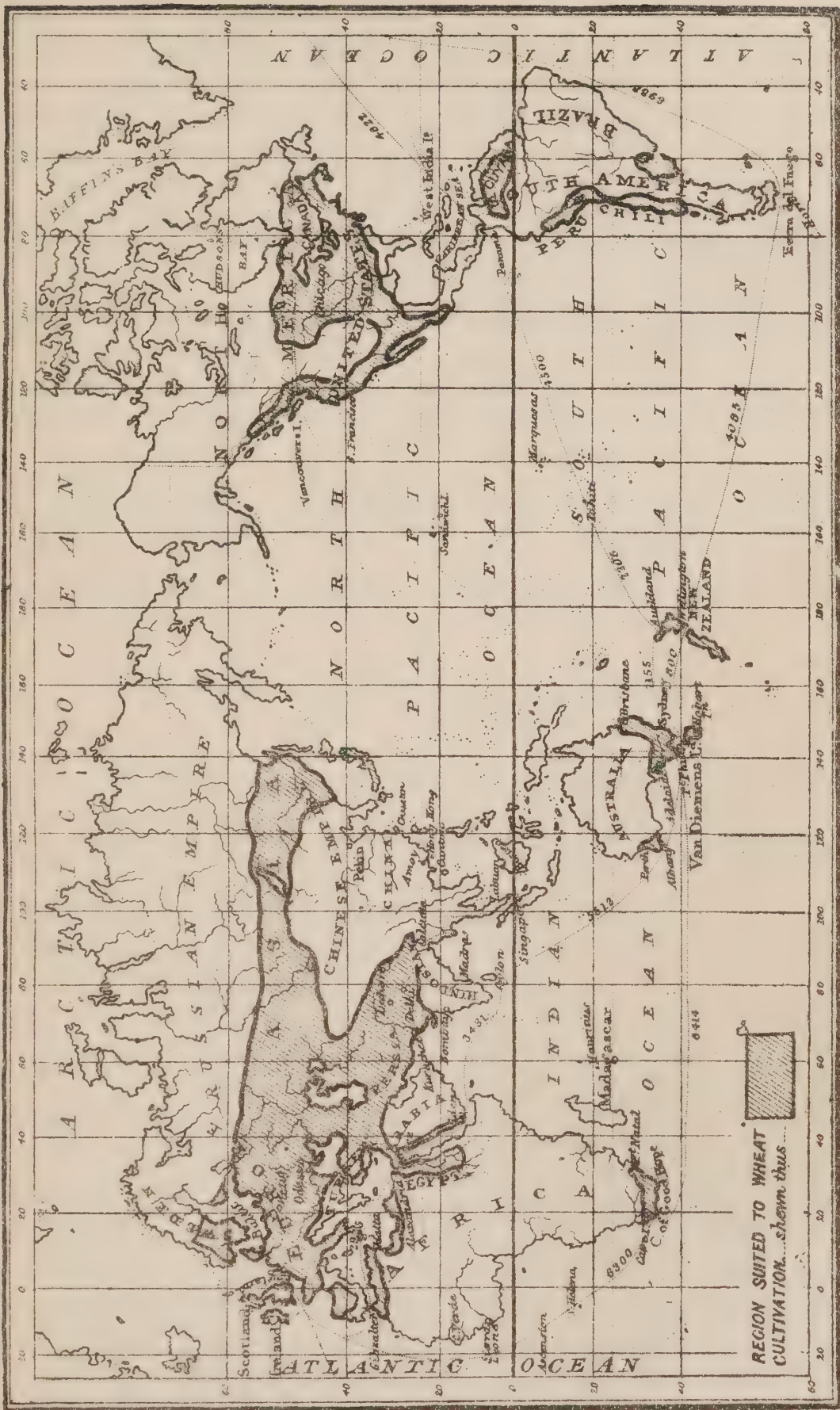
V.—Increasing Rate of Consumption likely to be Fully Supplied.

But we have not only to provide for an increased consumption by each individual, but for an annual increase of 240,000 in the

population. This, at $5\frac{1}{2}$ bushels per head, is 165,000 qrs. In ten years, at the same rate of progress, that will have swollen to nearly 2,000,000 qrs., and in ten years more to 4,000,000. This would indicate the need of a gradual rise in our foreign imports in ten years, from the present average of 8,000,000 qrs. a-year to 10,000,000, and in twenty years to 12,000,000 qrs. a-year. In one generation more, say thirty years hence, the imports will at this rate be more than the home growth, if that should remain at its present point. Our past experience of the readiness with which the volume of foreign wheat has increased with the demand would lead to the conclusion that we need entertain no apprehension on that score. California promises us next year more than 2,000,000 qrs. France alone, by a slight improvement in her husbandry, only so much as would raise her average yield from 15 to 18 bushels an acre, could meet our requirements. And when we consider the extent of rich countries within the wheat region farther east which are scarcely begun to be tapped by the railway system, we must feel that we are yet far from having reached the limit at which a moderate rate of price will bring us sufficient supplies. FOR WHEAT, WHICH FORMS THE GREAT STAPLE OF THE FOOD OF CIVILISED MAN OUTSIDE THE TROPICS, OCCUPIES OF ALL CEREALS THE WIDEST REGION SUITED TO ITS CULTIVATION.

The importance of this fact cannot be overrated. If the wheat region had been of small extent the increase of population would have been quickly limited to the food resources of each country. A continued development of mining and manufacturing enterprise in Great Britain would have been impossible. For nothing can be done without bread. Wheat is the common food, the real staff of life. The hardworking poor are far more dependent on and much larger individual consumers of it than the rich. If its price like that of most other commodities had risen, or was likely to rise, with the increasing demand, no political foresight, no more equable arrangement of the burden of taxation, no reduction even in public expenditure could have long availed us. But the wheat region has been designed apparently to be co-extensive with the progress of civilised man, and the more regular and extensive the demands upon it the more ready and continuous becomes the supply.

The natural tendency of the gradually falling price of wheat in this country since 1848, has been to diminish the breadth of our own wheat. And the force of that tendency, in spite of the great increase of gold, shows the steadiness of its operation. There has been a yearly increase of consumers, with an increased power and capacity to obtain bread, an increasing ratio in the supply of gold, the representative of its money value; and yet in spite of all that, the price has declined, and the average breadth of wheat grown in



REGION SUITED TO WHEAT CULTIVATION... shown thus...

ENGRAVED BY JAMES WYLD 457 STRAND.

the United Kingdom has diminished. But the figures in the statistical returns show how quickly the price of wheat affects the home supply. The two fine crops of 1863 and 1864 reduced the average price to little more than 40s. But in 1867 the price had risen to 64s., and in one year there was an addition of 300,000 acres to our breadth of wheat.

I have already in a previous paper shown that the rate of increased productiveness of the land under wheat is very slow. From that source, therefore, there is little hope of any material increase in our home produce, in the face of larger foreign supplies at low prices. When the price of wheat falls below 50s., the farmer begins to turn his attention to other crops. The value of barley has been rising in nearly the same proportion as that of wheat has declined in recent years, and oats have also fully maintained their price. While the farmer in these, and in the increasing value of his live stock and its produce, will be able to compensate himself against the steady decline in the value of wheat, the people, that vast and increasing body of consumers, have the prospect of abundant supplies of bread at a moderate price, from the yearly extension of the means of foreign transport.

VI.—*General Results.*

Having thus endeavoured to discuss the main question answered by the agricultural returns, viz., in how far the home crop is available for the national supply of bread, I proceed to extract from the returns certain other points affecting our food and clothing. Beyond a slight increase in the breadth of potatoes, and a nearly similar decrease in barley, and the large increase of wheat already referred to, there has been no material change in the general crops of the country during the last two years. The table showing the percentage proportions of corn and green crop in each division of the United Kingdom is very interesting. In round numbers it appears that England supplies nine-tenths of all the home-grown wheat, Scotland and Ireland together only one-tenth. And the increased breadth, sown under the stimulus of the high prices of the past year in England, is equal to the whole acreage under wheat in Ireland. England produces more than three-fourths of all the barley grown in the British Islands, nearly all the beans and peas, and one-third of the oats. Ireland grows one-half more oats than Scotland, and two-thirds of the entire potato crop of the United Kingdom. The three kingdoms, as compared with France and Prussia, grew the following proportions of acres of corn to their respective populations:—

England	1 acre for every	$2\frac{3}{4}$ persons
Scotland	1	$2\frac{1}{3}$ „
Ireland	1	$2\frac{1}{2}$ „
France	1	1 person
Prussia	1	1 „

And of potatoes—

England	1 acre for every	62 persons
Scotland	1	20 „
France	1	12 „
Ireland	1	5 „
Prussia	1	5 „

With regard to live stock, these countries stand in the following proportions :—

Cattle.			Sheep.		
England	1 for every	5 persons ; 1 for every 1 of population			
Scotland	1	3 „	2	„	1 „
Ireland	1	$1\frac{1}{2}$ „	1	„	1 „
France	1	$2\frac{3}{4}$ „	1	„	1 „
Prussia	1	3 „	1	„	1 „

Of all these countries Ireland has thus the largest proportion of cattle, and Scotland the largest of sheep.

VII.—*Increase of Cattle and Sheep.*

The entire loss sustained by the cattle plague up to October, 1867, when it had quite ceased, was 190,000 head. The natural increase in the two years since the disease began to decline exceeds 500,000, so that the effects of that calamity, so far as the national supply of food is concerned, have been fully recovered. The increase of sheep has been very rapid, the joint effect of high price of mutton, and the panic which in some counties followed the cattle plague, and led to a substitution of sheep. The total increase of the year has been 1,790,000. The sheep stock of the United Kingdom is upwards of 35,000,000, which is almost the same in number as that of the Australian Colonies and Tasmania, according to the latest returns. The total number of sheep in the United Kingdom and the whole of the British Colonies, independent of India, cannot now be much under 100,000,000. The import of continental wool is on the decline, while that of colonial is largely increasing. At the late rate of progress, our vast woollen industry in this country will ere long be sufficiently supplied by the home and colonial produce.

Whilst the increase of sheep at home has been rapid and great, there has been a very large decrease in the supply of foreign sheep. These, which in a single year, 1865, had risen from 496,000 to 914,000, began to decline in 1867, and fell back greatly in 1868.

This was caused in some measure by the restrictions imposed on the import of sheep by the Privy Council Orders, but was partly also due to the considerable fall in the price of mutton during 1868, arising from the large supply of sheep forced into the home market by the prospect of a dearth in the green crops. But the agricultural returns have revealed to us the gratifying fact, in relation to this important branch of the national food, that there is an immense elasticity in the production and supply of sheep, both at home and abroad, and that may be largely and quickly increased by a moderate rise in price.

VIII.—*Foreign Dairy Produce not Increasing.*

The foreign supply of butter and cheese has continued very steady during the last eight years. It made a sudden rise in 1861, and had nearly doubled itself in 1862, but from that year the average supply has not materially altered. As the prices of these articles are still highly remunerative to the home producer, there is every inducement to him to develop yet further that branch of agricultural industry, on which the small and middle-class farmers are chiefly engaged.

IX.—*Large, Compared with Moderate Sized, Farms.*

The returns afford some indication of the results of large corn farms as compared with the more mixed husbandry and interests of small or moderate-sized farms. I have taken ten of the largest farm counties in England, and compared them with ten of the smallest farm counties, the total area in both cases being nearly equal. The general results may be broadly summarised thus. The large farm system embraces nearly twice the proportion of corn, and half the proportion of green crops and grass. In other words, it is doubly dependent on the price of corn as compared with the middle-class farm system, which relies to a far greater extent on its dairy produce, its fat cattle, its vegetables, and its hay. The result is, that the latter pays more rent or surplus for the use of the land, and a higher rate of wages to the labourer.

There can be no doubt that circumstances of soil and position are the chief cause of the distinctive modes of husbandry which have continued to characterise different counties, notwithstanding the obvious change in the relative values of agricultural produce. The price of wheat is not higher now than it was one hundred years ago. Barley and oats have risen 50 per cent., and animal produce more than 100 per cent. in that time. And yet wheat maintains its prominence on the heavier soils where a bare fallow is still found the most perfect and economical preparation for that crop, and in the eastern, south midland, and southern counties,

where a dry climate and somewhat thin soil is less favourable to stock husbandry and grass. It is worthy of notice that in every one of the ten counties where the large farm system prevails the chalk formation predominates, and there is no coal; while in all the ten counties of the smaller farm system coal is present, and there is no chalk. The vicinity of coal has naturally influenced the increase of population, and the consequent higher rates of rent and wages.

X.—*Proportions under Bare Fallow.*

The extent of land in England under bare fallow every year is nearly 800,000 acres, which is more than one-tenth of the whole breadth of corn. The proportion in Scotland is about a twentieth, and in Ireland less than the ninetieth part. In France and Prussia an extent equal to one-third of all the cereals is annually left to lie fallow. This undoubtedly indicates the great prevalence of a poor and low state of husbandry in these countries, due in a large degree also to the dryness of the spring and summer climates. But of the three kingdoms it is very remarkable that Ireland should stand so pre-eminently above the others in her comparative freedom from the direct loss occasioned by the necessity of leaving the land to lie fallow, which cannot be wholly accounted for by the comparatively small proportion of clay soils in that country.

XI.—*Distinctive Features of Husbandry.*

There is a much greater similarity than will be generally imagined in the agriculture of England and Scotland, and a distinctive principle of difference between them and Ireland in a very important point. This will be clearly seen by the proportions of the whole area of the three countries, exclusive of heath and mountain land, thus divided:—

England has in corn and potatoes 33 per cent., in green crops and grass 66 per cent.

Scotland has in corn and potatoes 33 per cent., in green crops and grass 66 per cent.

Ireland has in corn and potatoes 20 per cent., in green crops and grass 80 per cent.

The agriculture of England and Scotland seems thus alike in its principle of one-third exhaustive and two-thirds restorative crops, while that of Ireland has only one-fifth exhaustive to four-fifths restorative. I have included potatoes in the exhaustive crops, so that Ireland, which has by far the largest proportion in potatoes, suffers some disadvantage by this mode of comparison. But the result is very startling, as it places the agricultural system of Ireland, as an ameliorating and reproductive self-supporting system,

far above that of England and Scotland. To this I will return. But as some illustration of the effect of this exhaustive system of corn husbandry as compared with its proportion of the restorative green crops and grass, the following figures gathered from the returns are deserving of notice :—

	Percentage of Corn and Potatoes.	Percentage of Green Crop, Fallow, and Grass.	Average Produce of Wheat per Acre.
			Bushels.
England	33	66	28
Prussia	45	55	17
France.....	54	46	14

This would seem clearly to show that deterioration rapidly follows the loss of a due balance between the exhaustive and restorative crops, where there are no extraneous means of supplying the loss.

XII.—*Feeble Yield of France Explained.*

The state of agriculture in France is of much importance to the consumer of bread in this country. In some recent years she has contributed one-third of our whole foreign supply of wheat, considerably more than the entire produce of Scotland and Ireland. A good crop in France, therefore, at once tells on our prices, whilst a failure brings her large population into competition with us in the general market of the world. She has a vast breadth annually under wheat, but the yield is very small. This has been attributed, and would appear partly due, to the poverty and want of skill of her small occupiers; and many arguments have been founded upon it against the small farm system and the minute subdivision of land. But it has often struck me in passing through that part of France which lies between us and Paris that the general cultivation of the land, and the appearance of the growing crops, was quite equal to our own, and the very low average rate of the yield of wheat officially stated seemed to me therefore unaccountable. The explanation has been afforded to me by the distinguished French economist, M. De Lavergne, in the following letter, dated 25th February last :—“ The official returns give a mean yield of 14½ hectolitres per hectare, the actual yield being more above than below the estimate. “ Eight departments, Le Nord, l’Oise, l’Aisne, Somme, Seine-et-Oise, Seine-et-Marne, Seine, and Eure-et-Loire, have a yield equal “ to the English average; but the forty-five departments which “ form the southern part of the territory, do not yield more than “ 10 hectolitres to the hectare. This feeble yield is caused in “ many of the departments by bad cultivation, and in the south by

“ the dryness of the climate in spring. The statistical returns “ also show 5,148,000 hectares of fallow, which is in fact the third “ of the surface sown with cereals.” There is no help for that part of the country which suffers from great dryness of spring climate, but there would seem much room for improvement in the yield of wheat over the remainder, which comprises probably more than one-half of the surface of France. As increasing importers and consumers we are nearly as much interested in that improvement as the French people themselves. The state of agriculture must be low, indeed, where it is possible to be carried on with an average produce of 10 to 12 bushels of wheat an acre. The costs and profits of cultivation must be at the very minimum to yield any surplus for rent, and the condition of the cultivator must be a hard one. He has other sources, no doubt, which may help him—his vines and oil—but in the nature of things it is impossible that he can get any profit from his wheat crop, until by such a change of system as will increase its yield. Towards this object the French Government have for some years been unremitting in their attention, by contributing largely from the public resources to improve the internal communication of the country and facilitate the interchange of products. The increase of a few bushels an acre over so large a surface as one-half of the wheat crop in France, would give her a regular surplus for exportation.

XIII.—*Irish Agriculture.*

It was my intention to have instituted a comparison between the large farm system of England, and the small farm system of Ireland, and I had prepared detailed statements of groups of counties in the two countries for the purpose; but there are too many elements of estimate or conjecture to warrant their publication as a statistical deduction. If we confine our attention to Ireland alone, some remarkable anomalies present themselves. The province with the highest valuation—Leinster at 20s. an acre—has the smallest population on the square mile of land under the plough; while Connaught, with a valuation of 6s. 8d. an acre—the lowest of the four provinces, has the largest population in proportion to its arable land. The poorest part of the country is thus also the most populous. But that does not seem to arise from an excess of small farms, for Leinster has a larger proportion of holdings under five acres than Connaught.

XIV.—*No Recent Reduction in Small Holdings.*

A great reduction took place in the number of small holdings in Ireland during the years of the potato famine, 1845 to 1850, but since 1850 there has been very little alteration. The comparison

one constantly meets with is between the years 1841 and 1861, the small farms being stated to have fallen in that time one-half in number, and the larger sized increased in an equal ratio. But that has not been progressive. It had all taken place before 1851, and there has been no marked change in this direction during the last eighteen years. In 1867 the number of holdings was 607,000, divided thus:—307,000 farmers holding farms of 15 acres and under, and 300,000 farmers of 15 acres and upwards. *But the first-class, or small farmers, hold not more than one-eighth of the cultivated land,—the second-class, or larger farmers, holding seven-eighths of the whole.*

We have already seen that the counties in England where the system of moderate-sized farms prevail have the smallest proportion of corn, and the highest of cattle and of dairy stock. They have a greater rainfall, a deeper soil, and are more productive of grass and green crops. Now, if we exclude from consideration for a moment the 307,000 small farmers, that is exactly the state of Ireland. Her climate and soil are very favourable to green crops and grass and to dairy farming, and she has the further great advantage, which I have already shown, of having the smallest proportion of such land as it is necessary to lay fallow; and her system shows the largest proportion in the three kingdoms of restorative to exhaustive crops. Her only disadvantage as an agricultural country is the occasional visitation of seasons of too much rain. That has several times imperilled the wheat crop. But the wheat crop is less than one-tenth of the cereals of Ireland, and her agriculture is but little dependent upon it. Oats are her chief reliance as a corn crop, and from flax she derives an annual return of between two and three millions sterling—an article which may be said to be now unknown to the agriculture of England and Scotland. If we sum all up, we find that, as compared with the sister kingdoms, Ireland has on the whole a more productive soil, and her produce is chiefly of that kind which in the last twenty years has risen most in value. I am very much disposed to think that the seven-eighths of Ireland, which are in the hands of the larger farmers, yield as great a produce per cultivated acre as the average of England and Scotland. I am not in a position to submit this to any accurate test of proof, but this is the impression left on my mind as the result of a careful investigation of the question.

XV.—*Distress mainly Confined to One-eighth of Land in Hands of Smallest Occupiers.*

But the position of the 307,000 small farmers who occupy the remaining eighth of Ireland is probably very different. It is among that body that real distress is found, though the class of larger

farmers, not much separated from them, have helped to swell the general complaint. Experience has shown that it is only in climates and upon soils the most favourable that an entire dependence for his subsistence can be placed by the cultivator of a few acres of land. Even in Belgium, where circumstances are favourable, the small cultivator has but a hard lot of poverty and toil. He thrives where, in addition to his land, himself and his family find regular employment in some other industry. It is the same with the English peasant. A man who has regular employment at wages finds an immense advantage in a good garden allotment beside his cottage, and that is vastly increased when that cottage is on the farm, away from the temptation of the beer-shop, and where, as part of his wages, he receives the keep of a cow. This is the system in the border counties, where agriculture is in the most prosperous state, and the agricultural labourer the best fed and clothed, the most educated and intelligent of his class in any part of the three kingdoms. But the Irish farmer of a few acres of inferior land must be in a position of chronic distress. The witnesses most favourable to him examined before Mr. Maguire's Committee in 1865, held that 15 to 20 acres and upwards was the least extent on which a man with his family could be expected to thrive. On land of good quality, and near a large population, a much smaller extent might no doubt be found sufficient. But taking the land of Ireland as it is, and the circumstances of the country, and its mode of agriculture, there is a general consent of the most competent judges in that country, that farms below 15 or 20 acres are too small to afford a due return for the entire labour of a man and his family. It would therefore follow that 130,000 of the small farmers, with their families, are as many as the remaining eighth of the surface of Ireland can profitably maintain as farmers, and that there will then remain a surplus of 170,000 and their families. These figures represent the whole number of holdings; but several holdings are believed to be in many cases in the hands of one farmer, and the total number of occupiers is therefore reckoned by Lord Dufferin not to exceed 441,000. If that be so, the surplus to be otherwise provided for will not exceed 100,000.

That seems no impossible achievement. A wise measure for settling the long agitated question of the tenure of land will give a great impetus to improved agriculture, and the consequent demand for labour will rapidly absorb that surplus. It is, after all, little more than one additional family for every 160 acres of cultivated land. I have no doubt that the Legislature which shall pass the great measure of pacification for Ireland, which is now under its consideration, will in due time complete the work by a just land law, which will give greater security to the employment of capital

in the cultivation of the land, and call into action that surplus labour, without which its latent fertility cannot be fully developed.

XVI.—*The English Agricultural Labourer.*

But, though the state of the Irish peasant has been more forced upon public attention, the condition of the agricultural labourer in England is very far from satisfactory. The agricultural returns afford no guide to its consideration. He is now the only class of the community who has no representative. The Irish peasant has, directly in many cases, by his vote as a small farmer, and indirectly through his church, which (connected neither with the landlord nor the State) brings the aggregate feeling of the people to bear upon their Parliamentary representatives. By one means or another they do make themselves heard in Parliament. But so little is known of the English agricultural labourer, that when his actual condition is set forth in the report of a Royal Commission, the public are struck with astonishment, and even the landowners are surprised to find a state of things at their doors which many of them little suspected. The condition of the labourers' dwellings is in some counties deplorable. It is not my province, however, on this occasion to enter further on that subject. I attempted to introduce a clause in the last Census Act, in 1860, which would have thrown much light on the state of our cottage accommodation, but it was rejected in the English Bill. It was adopted, however, in the Scotch census, and has shown that one-third of the population of Scotland lived, each family, in houses of one room only, another third in houses of two rooms; two-thirds of the whole of the people being thus found to be lodged in a manner incompatible with comfort and decency as now understood. The same returns in the next census will show the progress that has been made in the 10 years; and the public advantage of this will, I trust, lead to the adoption of a similar system in the next English census.

In the same year I moved for returns of the wages of agricultural labourers in England and Wales, which was subsequently followed for Scotland and Ireland. Upon these returns Mr. Purdy read to this Society an able and interesting paper in 1861. These form very important branches of the statistics of agriculture, and though it is not necessary that they should be included in the annual returns, I trust their importance will not be overlooked in the preparation of the next Census Act.

XVII.—*Great Change in proportion of the People Dependent on Agriculture.*

It has been found in Ireland, and is the case to a less extent in some parts of England, that it is not so much the low rate of wages

as the irregularity of employment which depresses the condition of the agricultural labourers. That is mitigated by emigration from the agricultural to the mining and manufacturing districts, or to foreign countries. Mere farming will not take up profitably the natural increase of population in a thickly-peopled country like ours, and the purely agricultural districts in each of the three countries are constantly parting with their surplus. The proportion between the producers and consumers of food is thus undergoing a marked change. In 1831, 28 per cent. of the population of England and Wales was occupied in the business of agriculture. In 1841 it was 22 per cent. In 1851 it had fallen to 16 per cent., not so much from an actual decrease of the numbers employed in agriculture as from the far greater proportional increase of trade. In 1861 the proportion was 10 per cent., and then not only had the proportion diminished, but the actual numbers had decreased by nearly one-fifth. It is a very remarkable fact that in the course of a single generation the proportion of the people of England employed in and dependent on agriculture had diminished from a third to a tenth. The only means of arresting this is by providing better-paid and more regular employment in country work, and thus diminishing the temptation of the higher wages of the mines, the factory, and the towns.

XVIII.—*Home Grown Sugar.*

Last year I touched on this subject, and mentioned the intention of trying the beetroot sugar growth and manufacture in this country. The experiment was made in Suffolk, and with so much promise of success, that in the same locality this season a sufficient breadth of beet will be planted to keep an extensive sugar factory in full work for the four slack months from October to February. The matter, then, will be beyond experiment, for if it proves, as is anticipated, the suitability of our climate and soil to the profitable production of sugar-beet, it will be the dawn of a new agricultural industry, which may rapidly be developed, to the great benefit both of England and Ireland. The possible magnitude of the result will be readily appreciated by the fact that in this country the consumption of sugar is equal to nearly one-third of all the sugar annually produced in the tropics and on the continent, and that any disturbance which would seriously alter the state of property or labour in Cuba, must give an immense stimulus to the demand for beetroot sugar. And the reduction of price which will follow the "free breakfast table" promised to us by Mr. Bright, as one of the early results of economy in our public expenditure, will rapidly augment that demand.

In a national point of view the introduction of a new manu-

facture connected with agriculture, such as beetroot sugar, will both enlarge the field of remunerative labour in the country, and provide an absolute addition to agricultural produce and wealth. For the pulp after the sugar is extracted has lost little of its value as cattle food, and therefore the substitution of sugar-beet for some of the present cattle crops will displace to a very small extent the means of feeding cattle. And even that will soon be made good by the more generous farming which the profits of sugar growing will enable the farmer to practise on the other crops of his farm.

I have here a specimen of the first English-grown sugar, not a mere experiment, but produced as a matter of business. I find, from a French paper sent to me this morning, that the northern departments of France now produce about 200,000 tons of sugar a year, or nearly two-thirds of the sugar consumed in France. We use twice as much sugar in this country as the French do, and its consumption is always increasing. At a reduction of price equal to the present duty that increase would rapidly extend. I may be over sanguine on the subject, but I should not be greatly surprised if in ten years hence many thousand acres in the United Kingdom should be profitably employed in the production of home-grown sugar.

XIX.—*Return of Horses Desirable.*

The last topic on which I will touch is one of omission. The returns of live stock do not include horses, the most interesting, and individually the most valuable of all. As every man knows the number of his horses, the return can be given without occasioning a particle of trouble, and I hope therefore that the schedule for the present year will include a column for horses.

In conclusion, I think it will be generally admitted that the agricultural returns have proved most useful and most instructive, and considering the ever increasing demands of our population on the resources of agriculture, I trust that nothing will be permitted to interfere with their continuance, and with that greater development which further experience may render it desirable to introduce.

MISCELLANEA.

CONTENTS:

	PAGE		PAGE
I.—General Results of the Commercial and Financial History of 1868	78	V.—Poor Men's Wives	115
II.—General Election, 1868	102	VI.—The Agricultural Labourer	117
III.—Cost of Lancashire Voters per Head	111	VII.—The Budget of the City of Paris	118
IV.—The Harvest Yield of 1868..	113	VIII.—The Reserves of the National Banks of the United States	121

I.—*General Results of the Commercial and Financial History of 1868.*

FROM the *Economist*. This forms the sixth history of the series which has appeared in that paper. See *Journal*, vol. xxxi, pp. 76—90 :—

“The year has been one of still further general recovery from the disasters of 1866 and 1867. We said twelve months ago that about the end of 1867 we had probably passed the lowest point of depression—and the events of 1868 have justified the expectations of those who looked for a slow return of more active dealings.

“I.

“In Foreign politics there have been few events of sufficient importance to disturb trade. The contest in the United States between Mr. Seymour and General Grant for the Presidency excited interest during the autumn, and Grant's success was regarded as perhaps the best result which could arise out of the conflict. Johnson has pursued a course so intemperate and imprudent as to render his re-election impossible. The exchange of provocations and menaces between France and Prussia has been in abeyance during the year. It is believed that France is now in such a state of preparation for war that she is no longer restrained by a sense of the superiority of Prussia. The tremendous nature however of any collision between the two Powers, and the uncertainty of the result as regards France, and the positive certainty that neither side could obtain any real concession of territory from the other, seems to be gradually imposing restraint and prudence on the two Governments. There is still, however, the essential uncertainty which hangs over the policy of a country which, like France, is absolutely in the hands of a single man, who, at the age of 60 and in feeble health, directs all his thoughts to the consolidation of his dynasty. The revolt in Spain in the autumn, its rapid success, and the orderly manner in which peace has been maintained by the Provisional Executive, have been subjects rather of curious interest than of real importance out

of the Peninsula. At the end of the year came the dispute between Turkey and Greece, excited no doubt by the imprudent and uncalled-for comments of Lord Stanley, at Lynn, on the present state of Turkey. At one time the quarrel seemed likely to involve the Great Powers. But the timely capture in Crete of a large band of Greek adventurers, who had been ostentatiously sent over from Athens to complete, as it was said, the Cretan revolt: the energy of the Turkish Government: and more than all the utter inability of Greece to obtain either money, men, ships, or war material, enabled France, England, and Austria to put such pressure on Russia as sufficed to terminate the difficulty. The result of the whole affair, therefore, is to give Turkey a further opportunity of consolidating its resources, inasmuch as it has been proved that while Greece by itself is powerless, Russia, its ally and instigator, is at least at present not able to follow up its intrigues by a display of force.

“The end of the war in South America between Brazil and its allies against Lopez, the Dictator of Paraguay, came quite at the end of the year—or rather in January, 1869. The war has lasted three years, and it is the most destructive and costly contest carried on in modern times in South America. In the end Lopez has been utterly defeated, but not until Paraguay has been almost depopulated. The enormous amount of war material of the best descriptions collected by Lopez during the last ten or fifteen years with a view to aggressions on his neighbours seemed almost incredible. The end of the contest will have all the effects of a beneficent deliverance for Brazil, upon which the drain of men and treasure has already produced real peril and distress. The exchange on London for example, which three years ago stood at 27*d.*, fell to 17*d.* It is now about 19*d.* The disbanding of the army in the field, and the dispersion of the immense body of camp followers, will in some measure supply the labour so urgently required in the coffee, sugar, and cotton plantations of the country. The conquest of Paraguay opens to commerce the whole of the upper navigation of the great rivers of the continent, and the sufferings and achievements of the war and the burdens it has left are perhaps the best lesson in civilisation which could be learnt by the South American people at the present juncture of their history. The difficulties in Brazil have largely reacted on Portugal, the wealthier and trading classes of which are dependent in no small degree on Brazil for a large part of their income.

“The expedition to Abyssinia came to a successful end in March (1868) by the destruction of Magdala and the death of King Theodore. The enterprise was creditable, but very costly; for at an expense of nearly ten millions sterling we have repaired a blunder of red tape, and performed an achievement which will long reverberate through the Asiatic countries. The Government had sufficient good sense to evacuate Abyssinia without loss of time; and the three or four millions of treasure expended among the tribes of the Red Sea may possibly assist them to become by slow degrees consumers of English calicoes and hardware.

“The differences with the United States on the subject of the

escape and depredations of the Confederate cruiser *Alabama* have occupied much attention during the autumn. The Ambassador, Mr. Reverdy Johnson, sent from Washington to this country for the declared purpose of settling all open questions, committed himself immediately to an incessant course of public dinners and appearances, apparently with the object of taking credit for the rapid success of his mission. Both Lord Stanley and Lord Clarendon appear to have shared Mr. R. Johnson's sanguine conclusions. At length—in December—the text of the convention became known, and at once occasioned surprise and disappointment as being unduly favourable to America. In the United States, however, it has met with marked disfavour, and in February (1869) was reported to be rejected by the Senate. It is impossible to avoid seeing that the negotiation has chiefly failed through the noisy vanity of the American Envoy. It is a grave misfortune that there should exist between the two countries so serious a cause of disagreement. But diplomacy is for a time exhausted, and the whole subject must be left to the chances of the future, and to the slow good sense of both parties.

“The general election under the new Reform Act, with its virtual household suffrage, has been a formidable hindrance to business nearly all through the year. The preparations began in June and July, and continued till the issue of the writs in November. The new House of Commons is essentially the same in character as the old one—and bearing in mind that at last we are free from the perpetual obstruction of reform debates, time ought to be found for some of the large arrears of practical legislation.

“ II.

“The summer of 1868 will be memorable as one of the most extraordinary of those seasons of drought which at rare intervals occur in this country. From June to September the heat and the absence of rain produced effects quite novel to the younger race of farmers. Pasture was almost destroyed, and cattle and sheep were sold for a fourth or fifth of the ordinary price by persons unable to procure food for them. Roots and spring corn were seriously injured; but the wheat crop was perhaps the finest in quality and the earliest gathered since 1825—the last most notable year of heat and dryness. ‘The crop of 1868,’ say Messrs. Horne, in the circular quoted *passim*, ‘although not so enormous as that of 1863, will be classed among the largest and finest grown in this country in the present century, for there was a large breadth sown, and a great yield in quantity to the acre, and an enormous weight to the bushel; in addition to which none was injured at harvest time. We think that about 36 bushels per acre, or 28 per cent. over an average, may be taken as the average growth of the United Kingdom, against about 25 bushels per acre in 1867, and 28 bushels per acre on an average of seasons; and taking our average annual growth at 14 million quarters, we have nearly $2\frac{1}{4}$ million quarters excess quantity, making a total surplus in *weight and measure* of about 3 million quarters.’

“As regards Foreign Harvests Messrs. Horne report:—That *France* secured a full average crop; *Italy* a small crop; *Spain and Portugal* very deficient; *Hungary* far less fortunate than in 1867, when the extraordinary abundance of the Hungarian harvest, and the almost general deficiency in the rest of Europe, poured a tide of wealth into the Trans-Leithan provinces of Austria of almost fabulous amount. *North and South Russia* crops fine in quality, but mostly under average quantity; *America* barely an average; *Australia, California, and Chili*, very productive.

“In Appendix (L) we give the report of the Board of Trade on the agricultural and cattle statistics of this country in 1868. The details are of great interest, and the experience of the two previous years' collections has imparted a high degree of accuracy to the figures now published.

“The propitious Wheat Season of 1868 at once affected the corn markets, and in the course of a few weeks reduced the prices from (say) 72*s.* to (say) 51*s.*—or perhaps lower. The following Table (I) gives the prices of the six years, 1863-68, at 26th October, or immediately after the result of the harvest had been ascertained; and also the average price of each year:—

(I).—*Gazette Average Prices of Wheat per Quarter in United Kingdom, Immediately after the Harvest, 1863-68, and Total Average of each Year.*

After Harvest.			Calendar Year.		
		<i>s.</i> <i>d.</i>			<i>s.</i> <i>d.</i>
1868.	26th October	53 4	1868.	Twelvemonths	63 9
'67.	„	70 8	'67.	„	64 6
'66.	„	52 6	'66.	„	49 11
'65.	„	42 4	'65.	„	41 10
'64.	„	38 6	'64.	„	40 2
'63.	„	40 —	'63.	„	44 9

“It seems to be likely that the average price of the harvest year, 1868-69—that is September, 1868, to August, 1869—will be about 50*s.*—or nearly the same as 1866—but 25 per cent. above the abundant years 1865 and 1864. A favourable harvest in 1869 in this country and over Europe would reduce the price to perhaps 42*s.* to 45*s.* and would go far to remove existing difficulties of short employment and bad trade. It is upon the surplus money left in the pockets of the scores of millions of working people *after* they have supplied themselves with bread that the consumption of all other articles depends.

“This part of the case will be illustrated in detail by the following Table (II), which brings into one view the facts collected by Messrs. Horne, and by Mr. James Caird—one of the most competent and judicious writers on agricultural statistics:—

(II).—*Grain and Flour of all kinds Imported into United Kingdom, 1862-68, and the Computed Value thereof, per Horne and Son's Circular; also Estimate of Quantity and Value of the Home Produce of Wheat, given by Mr. Caird (Statistical Journal, June, 1868).*

[19,0 = 19,000,000 millions.]

Years.	Grain and Flour of all kinds Imported—(Horne).			Home Produce of Wheat—(Caird).			Home Crop of Wheat.
	Quantities.		Value.	Home Produce of Wheat.	Average Bushels per Acre.	Average Annual Price.	Value.
		Mlns.	£	Mln. qrs.	bushls.	s. d.	£
1862....	qrs.	19,0	37,772,000	13,7	29 $\frac{2}{3}$	44 9	30,700,000
1863 ..	qrs.	15,3	25,600,000	16,3	35 $\frac{1}{4}$	40 2	27,100,000
'64....	„	12,2	19,700,000	15,0	32 $\frac{1}{2}$	41 10	31,500,000
'65....	cwts.	50,1	20,500,000	13,4	29	49 11	33,500,000
1866 ..	cwts.	63,3	29,100,000	11,7	25 $\frac{1}{2}$	64 4	37,600,000
'67...	„	65,3	41,400,000	9,7	21	65 —	31,500,000
'68....	„	66,7	39,000,000	—	—	—	—

“Mr. Caird's statement of the home and foreign supplies of wheat for the United Kingdom is as follows:—

Year.	Home Produce.	Foreign Import.	Total Supply.
	Qrs.	Qrs.	Qrs.
1862	13,700,000	7,205,000	20,905,000
'63	16,300,000	6,727,000	23,027,000
'64	15,000,000	6,030,000	21,029,000
'65	13,400,000	6,850,000	20,250,000
'66	11,700,000	7,283,000	18,983,000
Average	14,000,000	6,820,000	20,820,000

“The result of these figures is to show roughly an average Home Crop of 14 millions of quarters, and a foreign supply of 7 millions of quarters—together 21 millions. Shortly, therefore, a rise or fall of 20s. in the average annual price means 21 millions sterling *deficit* or *surplus* in the fund available for articles *other than* bread.

“We trace in the figures of this table palpable evidence of the disastrous effect of the bad seasons of 1866 and 1867. The failures of the harvest in these two years entailed an extra cost of at least 40 millions sterling on the country—and at the very time when a severe collapse of enterprise and credit had greatly reduced our resources. The result was much the same as if all Customs' duties had been doubled for the two years 1866-67 and 1867-68.

“ III.

“The tone of most of the trade circulars collected and epitomised in the next division of this review is far more cheerful than

at the end of 1867. There has been no marked revival or recovery in 1868, but the darkest period is generally felt to have been got over, and the prospects of the future are relieved from much uncertainty.

“ The tendency of the wholesale prices of the leading articles has been towards slightly higher rates, with of course some notable exceptions, *e.g.*, wheat, which is 25 per cent. cheaper, and coffee, wool, and tobacco also 10 to 16 per cent. cheaper. Cotton, on the other hand, is 70 per cent. dearer.

“ The following Table (III), collects the *percentages* into the form adopted in previous years:—

(III).—*Wholesale Prices in London. Comparison of 1st January, 1869, with Three Former Dates, stating in Percentages the Degree in which the Prices of 1st January, 1869, were Higher or Lower than the Prices prevailing at the Three Selected Earlier Dates.*

Articles.	Higher	Lower	Higher	Lower	Higher	Lower	Higher	Lower
	Than 1st January, 1868.		Than 1st January, 1867.		Than 1st January, 1864.		Than 1st July, 1857.	
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Coffee	—	10	—	15	—	16	—	16
Sugar	—	—	8	—	—	15	—	40
Tea	3	—	—	1	—	17	—	34
Wheat	—	25	—	18	23	—	—	23
Butchers' meat	4	—	—	3	—	—	12	—
Indigo	—	7	—	1	16	—	18	—
Oils	—	8	—	9	—	3	—	10
Timber	3	—	1	—	—	5	—	6
Tallow	13	—	5	—	20	—	—	34
Leather	—	—	7	—	2	—	—	9
Copper	2	—	—	9	—	30	—	12
Iron	—	—	—	3	—	20	—	30
Lead	—	2	—	5	—	8	—	24
Tin	14	—	30	—	—	2	—	22
Cotton	71	—	—	27	—	60	42	—
Flax and hemp	2	—	7	—	—	10	2	—
Silk	13	—	—	—	24	—	—	10
Wool	—	10	—	28	—	32	—	28
Tobacco	—	16	—	16	—	48	—	21
Cotton cloth	14	—	—	26	—	50	18	—
Total Bank Note circulation of Great Britain }	—	2	1	—	7	—	8	—

Note.—This table, deduced from the percentages given in Appendix (C), and may be read thus:—On 1st January, 1869, coffee was 10 per cent. *lower* than on 1st January, 1868; 15 per cent. *lower* than on 1st January, 1867; 16 per cent. *lower* than on 1st January, 1864; and 16 per cent. *lower* than on 1st July, 1857.

“ If the prices of 1st January, 1869, be compared with those of 1st January, 1864,—a date nearly corresponding with the first decided stage of the prosperity period,—it will be seen that the fall has been very considerable indeed. Coffee, sugar, and tea are 15 per cent. lower; copper and iron, 20 to 30 per cent. lower; wool 32 per cent., flax 10 per cent., and tobacco 48 per cent. lower.

“ There have been few disputes about wages during 1868, and the rates remain much the same as at the close of 1867—that is to say, about 20 to 25 per cent. below the limits which had been reached early in 1866, before the panic. Looking at this reduction of wages and at the cheaper prices of most raw materials, and remembering the rigid economies which have been enforced by the events of the last three years, it is probable that the cost of most of the staple manufactures of this country has been reduced not much less than 30 per cent.

“ The Royal Commission, under Sir William Erle, on Trades’ Unions, has pursued its investigations through the year, and has collected the most extensive and varied body of evidence ever amassed on such a subject. The report is now nearly ready for issue, and may in a great degree determine the course of future legislation.

“ IV.

“ The Abyssinian War has led to a large increase in 1868 in the exports of gold and silver to Egypt and the East.

“ The total exports by English and French steamers were—

	£
1867	3,695,000
’68	10,075,000
	<hr/>
Increase	6,380,000
	<hr/>

“ Of this $6\frac{1}{3}$ millions of increase, nearly 4 millions is due to the Abyssinian War. The slightly-increased exports to India have arisen from the revived demand for Indian cotton.

(IV).—*Export of Gold and Silver to Egypt and East, per Peninsula and Oriental and French Steamers. (Low's Circular.)*

Months, &c.	Gold.	Silver.	Totals, 1868.	Totals, 1867.
1868.	£	£	£	£
January	46,820	11,100	57,920	20,600
February.....	172,830	26,820	199,650	27,200
March	133,480	195,780	329,260	67,400
April	153,000	217,700	370,700	328,700
May	186,890	34,620	221,510	6,700
June	31,120	70,550	101,670	17,400
July	44,620	164,990	209,610	20,300
August	55,360	50,340	105,700	45,800
September	175,660	94,000	269,660	90,400
October	257,140	259,250	516,390	109,000
November	184,420	113,000	297,420	108,600
December	123,260	412,000	535,260	60,700
From England	1,564,630	1,650,130	3,213,750	903,000
Peninsula and Oriental Company from Mediter- ranean ports	2,871,270	1,498,490	4,369,760	1,615,000
	4,435,900	3,148,620	7,583,510	2,518,000
Per French steamers	2,082,160	410,000	2,492,160	1,177,000
1868—Totals	6,518,060	3,558,620	10,075,670	3,695,000
1867.....	1,648,000	2,047,000	3,695,000	—
'66.....	2,871,000	7,075,000	9,946,000	—
'65.....	4,349,000	9,744,000	14,093,000	—
'64.....	6,969,000	16,956,000	23,925,000	—
1863.....	8,022,000	15,136,000	23,158,000	—
'62	3,391,000	14,599,000	17,990,000	—
'61.....	1,427,000	8,859,000	10,286,000	—
Totals	35,195,000	77,974,000	113,168,000	—
Average eight years, 1861-68	4,400,000	9,747,000	14,146,000	—

“ The totals presented by this table are most remarkable. In the eight years 1861-68 there has been sent from Europe to the East—

	£
	35,000,000 of gold
	78,000,000 „ silver
Total	113,000,000
Average	14,146,000 per annum

“ In looking at these enormous figures, it is impossible to avoid speculating on the utter disorganisation of all industry which must have taken place if the supplies of gold from Australia and California had not been available for these Eastern remittances.

“The effect of the cessation of the bullion drain to the East early in 1866 is strikingly shown in the rapid rise of the total bullion reserves of the Bank of England and the Bank of France. Thus—

<i>Bank of England.</i>			<i>Bank of France.</i>		
1866. February	12	mlns. sterlg.	1864. April.....	9	mlns. sterlg.
'67. October.....	23	„	'68. September	53	„
	—			—	
<i>Increase</i>	11	„	<i>Increase</i>	44	„
	—			—	

“In these two cases we find an increase of 55 millions of treasure. The highest point of the reserves however has been passed. The Bank of England reserve is already 3 millions less than in October, 1867, and the Bank of France reserve nearly 11 millions less than in September, 1868.

“ V.

“The cotton trade continues to be the great difficulty of this country. The following short Table (V), brings to a point the leading facts as regards 1868 and 1867 and the preceding years:—

(V).—*Cotton Trade, United Kingdom. Average Price. Annual Cost and Consumption.*

Period.	Average Price per Pound.	Annual Value of Cotton Consumed.	Total Annual Consumption.
		Mln. £	Mln. lbs.
1868.....	$9\frac{5}{8}$	41	996
'67.....	$10\frac{1}{8}$	41	954
1866.....	$13\frac{1}{2}$	52	891
'65.....	$15\frac{3}{4}$	47	718
'64.....	22	52	561
Five years, 1856-60	$6\frac{1}{2}$	25	900

“We have here, it is true, a slightly reduced average annual price, and a slightly increased total quantity. But the increase in quantity is not by any means adequate to keep in full work the additions which have been made of late years to the ‘spindle power’ of Lancashire and the cotton region. ‘As compared,’ say Messrs. Ellison and Haywood in the Circular quoted *passim*, ‘with 1860, the weekly consumption of 1868 exhibits a *deficiency* of 4,000 bales (of 400 lbs.) or $4\frac{3}{4}$ per cent. This is not a very large decrease, but as an increase of at least 10 per cent. has taken place in the *spinning power* of the country since 1860, the average consumption of 1868 represents only 84 per cent. of full time—or (say) about five days a week. To give full employment to the spindles now in existence we should require fully 57,000 bales (of 400 lbs.) per week, or 64,500 bales of the average weight (353 lbs.) of the 1868 import.

“The present rate of consumption is probably not more than

about 50,000 bales of 353 lbs., or rather more than three-fourths of the quantity required to keep the whole of the existing spindles fully going. In other words, the mills at present are working *on the average* only just over $4\frac{1}{2}$ days per week. We say *on the average*, because some mills are closed altogether, while the working time of others varies between three and six days per week.'

"The following Table (VI) gives the annual and weekly consumption, in bales of the uniform weight of 400 lbs., for the ten years 1859-68.

(VI).—*Raw Cotton. Consumption of United Kingdom, 1859-68. In Bales of 400 lbs. each.*

Year.	Bales.	Per Week.	Year.	Bales.	Per Week.
1868	2,490,000	47,890	1863	1,191,000	22,910
'67	2,386,000	45,890	'62	1,124,000	21,620
1866	2,226,000	42,820	1861	2,563,000	49,300
'65	1,796,000	34,550	'60	2,698,000	51,890
'64	1,402,000	26,980	'59	2,444,000	47,000

"Now it is precisely this deficiency of 25 per cent. in the quantity of *raw material* compared with the present *spindle power* which is working so much mischief among the manufacturers. The result is of course to place all the comparatively old mills and old machinery and the people of deficient credit and capital in the position of being unable to work at any profit. During 1868, therefore, there have been perpetual complaints from Lancashire, and there have been numerous failures. *Short time* has been recommended by large meetings of spinners and weavers, and has been partially adopted; but not to an extent to relieve the men who do not possess first-class mills and large capitals. The difficulties in the way of short time are considerable. The manufacturer hopes for the early arrival of better times, either in the shape of more raw material, or better markets for his goods. If he closes his mill and disperses his 'hands,' he knows that to start afresh will be costly and difficult, and for some time longer therefore he struggles with his accumulating losses. So far wages have not been formally reduced; but in detail doubtless more labour is obtained for the same money. If the bad trade continues it must of course fall upon the work-people in some degree.*

* "The following paragraph appears in the *Daily News*, 25th February, 1869:—'Although the gloom and depression in the cotton trade is greater than it has been known since the cotton famine, the recent proposition, emanating from the committee of the Blackburn Masters' Association, may be said to have been abandoned. Out of 150 manufacturers within the hundred of Blackburn who have been waited upon by deputations of their hands, not more than twelve have expressed themselves in favour of a reduction of wages. The Blackburn standard list agreed upon as the wages basis in the year 1853 is considered harsh and unequal in a few instances, but any serious departure therefrom would create an impassable gulf between masters and operatives. The committee of the Masters' Association have met and considered the question, but have declined to recommend any attempt to reduce wages.'

“ There are some regulations in the cotton trade which a time of difficulty like the present might be expected to modify. For example, the spinners are generally said to be persons of capital, because they must pay cash for the raw cotton ten days after the purchase. But the weavers who buy the yarn of the spinners are believed to be, as a rule, not financially strong, inasmuch as the ‘ prompt ’ on yarn is six weeks, and in many cases the weaver really trades upon the spinner’s capital—that is to say, he converts the yarn into cloth before the end of the six weeks, and pays the spinner with the price obtained from the buyer of the cloth. This six weeks’ credit seems to be excessive, and can only encourage the intrusion into the trade of numbers of weak and speculative operators.

“ The course of the market in 1868 has been almost uniformly against the spinners and weavers, as is shown by the following figures :—

(VII).—1868. *Margin between Raw Cotton and Yarn, and between Yarn and Cloth.*

	February.	June.	October.	December.
	d.	d.	d.	d.
(1) Cotton and yarn	5 $\frac{3}{8}$	5	4 $\frac{1}{8}$	4 $\frac{3}{4}$
(2) Yarn and cloth	1 $\frac{1}{2}$	— $\frac{3}{4}$	1	1

“ The following Table (VIII) gives the details of the cotton trade for the thirteen years 1856-68 :—

(VIII).—*United Kingdom, 1856-68. Estimated Value of Raw Cotton Imported, Re-Exported, and Consumed.* (Ellison and Haywood’s Circular.)

[00,000’s omitted, thus 52,0 = 52,000,000/. The bales are given without abbreviation.]

Years.	Import.		Exported.	Consumed, United Kingdom.		
	Value.	Price.	Value.	Value.	Total Weight.	Bales per Week, 400 lbs. each.
	Mln. £	Per lb. d.	Mln. £	Mln. £	Mln. lbs.	Bales.
1868	52,0	9 $\frac{5}{8}$	11,6	41,0	996,1	47,890
’67	53,8	10 $\frac{1}{8}$	14,0	41,2	954,5	45,890
’66	75,8	13 $\frac{1}{2}$	19,5	51,9	890,7	42,820
1865	63,2	15 $\frac{3}{4}$	17,1	47,2	718,6	34,550
’64	82,2	22	22,1	52,4	561,2	26,980
’63	58,0	20 $\frac{1}{8}$	21,6	40,7	476,2	22,910
1862	31,1	14	12,4	26,7	449,8	21,620
’61	38,7	7 $\frac{3}{8}$	7,9	32,2	1,005,5	49,300
’60	36,6	6 $\frac{1}{8}$	5,5	28,9	1,079,3	51,890
1859	32,2	6 $\frac{1}{2}$	4,1	27,6	977,6	47,000
’58	27,2	6 $\frac{3}{8}$	3,3	24,8	907,8	} Not given
’57	28,6	7 $\frac{1}{8}$	3,5	24,8	825,0	
’56	26,0	6 $\frac{1}{2}$	3,3	22,7	—	

“ The standard year for comparison is 1860. In that year there was full employment for the whole available spindle power—a low price—and a comparatively small import cost. The figures contrast as follows with those of 1868 :—

Year.	Price.	Cost.	Weight.	Per Week.
	<i>d.</i>	Mln. £	Mln. lbs.	Bales.
1860	6 $\frac{1}{8}$	29	1,079	51,900
'68	9 $\frac{5}{8}$	41	996	47,900
1868 less	—	—	83	4,000
„ more	3 $\frac{1}{2}$	12	—	—

“ These results of necessity imply two chief difficulties to the manufacturer—namely, (1) a loss of 25 per cent. of the producing power of his mill, and (2) a formidable restriction of the market for his goods by reason of the advance of at least 50 per cent. on their retail price. Cotton cloth at 3*d.* a yard is a very different article to cotton cloth at 5*d.*—when 80 per cent. of the consumers to be reached can only afford to spend the smaller sum. It is true as regards the home trade in 1867 and 1868 that it has been greatly restricted by the high price of food, low wages, and uncertain employment; and it is probable that among the poorer classes there is a comparative deficiency of cotton clothing to be made good when better times reappear—and that is a probability which the manufacturers do not overlook. But there still remains the difficulty of the enhanced price as compared with the pre-war period.

“ The prospects of the Cotton Supply of 1869 are on the whole rather better than the actual results of 1868 :—First as regards the United States: The American Cotton Crops have been—

	Bales.
1868–69	2,550,000 (estimate)
'67–68	2,577,000 (actual)
'66–67	2,204,000 „
'65–66	2,329,000 „
'59–60	4,675,000 „

“ The crop, therefore, of the present and three preceding years is little more than half the crop of 1860—nor, we confess, does it seem to be likely that for many years to come the American crop can be much more than 2 $\frac{1}{2}$ millions of bales. It is not merely the poverty, exhaustion, and political collapse of the South which have to be overcome—but more than all, it is the destruction of negro labour. A large cotton crop in the Southern States can only be procured by the systematic application of sufficient negro labour—and such labour we apprehend does not exist. In 1866, Sir Frederick Bruce sent home officially from Washington a paper drawn up, after careful inquiry in the South, by Captain Hickson, of the Royal Engineers, deputed to visit America by persons interested in the cotton trade—and in this paper there is the following passage :—

“ ‘It is probable that at least one-fourth of the old negro labour is already lost to the agriculture of the South. The mortality among the black population has been very large, and to this loss must be added the great number of the more intelligent hands who were impressed or who enlisted into the Federal armies, and those who escaping enlistment have swarmed into the large towns, where they find employment much more suited to their tastes than that of field labour. There has likewise been more or less emigration to the North.’

“If this view be correct we are not justified in expecting to see the American crop reach even 3,000,000 bales for a long time.

“The following are the estimates of the imports of cotton into the United Kingdom in 1869 as compared with previous years :—

Raw Cotton, 1867-68-69 and also 1860. Actual and Estimated Imports into and Re-Exports from United Kingdom, in Bales. (Ellison's Circular.)

From, and Average Weight in, 1868, of Bales in Pounds.	1869. Estimate.	1868.	1867.	1860.
	Bales.	Bales.	Bales.	Bales.
America (443)	1,350,000	1,269,000	1,226,000	2,583,000
India (370)	1,500,000	1,452,000	1,511,000	563,000
Brazil (160)	800,000	637,000	437,000	103,000
Egypt, &c. (500)	270,000	202,000	198,000	106,000
West Indies (180)	120,000	100,000	129,000	—
Total import	4,040,000	3,660,000	3,501,000	3,366,000
Deduct re-export	920,000	915,000	1,015,000	610,000
Remains for United Kingdom	3,120,000	2,745,000	2,486,000	2,756,000
Equal bales per week of (say) 353 lbs. }	60,000	53,000	48,000	53,000

Note.—The weights of the bales varies greatly from different countries and also in a less degree from year to year. The average weight of the bales of 1860 is given as high as 425 lbs.; the weight of 1867 is 364 lbs.; and of 1868 is 354 lbs. The supply, therefore, of 1860 in *pounds weight* of cotton was far beyond 1867-68 or 1869, as appears by the following figures of import into United Kingdom :—

Year.	Weight.	Average Price.	Value.
	lbs.	d.	£
1860.....	1,435,000	6½	36,642,000
1867.....	1,275,000	10½	53,798,000
'68.....	1,296,000	9½	52,013,000
1869 (?)	1,426,000	—	—

“The figures for 1860 show the profound change which has already taken place in the sources of supply. India, Brazil, and

Egypt will become every year more securely established as fields of cotton cultivation, and the rapidity with which we shall approximate to the low price of 1860 ($6\frac{1}{2}d.$ per lb.) will depend almost entirely on the spread of the cotton agriculture of those three regions.

“The conclusions justified by this survey seem to be the following :—

“1. That in 1868 the cotton manufactures of this country have sustained great losses in consequence of the supply of raw material being on the average of the present spindle power about 20 to 25 per cent. deficient : and also in consequence, in a secondary degree, of the price of raw cotton being still 50 per cent. above the prices of 1856-60.

“2. That a continuance of these unsatisfactory conditions will in a short time compel the older mills and machinery and the weaker manufacturers to quit the trade.

“3. That there seems to be no adequate reason for expecting any rapid increase in the extent of the American crop.

“4. That the additions to the supply of the next few years must be obtained almost entirely from India, Brazil, and Egypt.

“VI.

“Next to cotton, the greatest and most rising industry of Great Britain is Iron, Steel, and other articles of manufacture and hardware of which they are the primary material. All the circulars concur in stating that in the course of 1868 the iron trade underwent a considerable change for the better. Messrs. Fallows and Co. (Liverpool) say, as quoted *passim*—‘The iron trade during the early months of 1868 was in a very unsatisfactory condition, and several failures were reported amongst the Staffordshire manufacturers—the result of a long continuation of unremunerative prices. The strike in Staffordshire against a reduction of wages interfered with the production during the months of April and May, and the extreme heat of July and August had a similar effect. About the latter period there was an improved demand for manufactured iron, and this, coupled with a large business done in rails, led to a much better feeling, and there now seems good reason to anticipate that the trade is emerging from the long period of depression under which it has suffered. The *exports* of iron continue steadily to increase—the returns for eleven months, 1868, show 26,000 tons more than 1867, and 239,000 tons more than 1866. The export of rails to the United States has increased from 97,000 tons in 1866, and 157,000 tons in 1867, to 248,000 tons in 1868.’

“The iron industry of this country is in rapid process of redistribution as regards locality, and change of character as regards some of the most important stages of manufacture. The *Iron Trade Review* (Newcastle) quoted *passim*, says—‘The development of the pig iron trade from Cleveland to Scotland is one of the most remarkable features of 1868. Twelve months ago it was thought truly marvellous that so much Cleveland iron should have been purchased by Scotch consumers. But the statistics of 1868 show that the quantity has continued steadily to increase, until in the aggregate more than 150,000 tons of Middlesbrough iron has been

exported to Scotland by rail and sea—against 71,000 tons in 1867.’ The average price in 1868 of Scotch iron at Glasgow has been 52s. 9d. per ton; the average price of Cleveland iron at Middlesborough has been 44s. There is of course some superiority of quality in the Glasgow iron—but a superiority rapidly diminishing.

“The discoveries of iron stone during the last few years in Lincolnshire and Northamptonshire have already begun to render blast furnaces a feature of the quiet scenery of those counties. The production of iron ore and of pig iron in 1868 is given as follows (*in tons*):—

District.	Iron Ore.	Pig Iron.
Cleveland	4,000,000	1,260,000
Lancashire and Cumberland	1,750,000	500,000
Scotland	1,300,000	1,068,000
North Staffordshire	750,000	220,000
South „ „	500,000	520,000
West Riding, Yorkshire	575,000	110,000
	8,875,000	3,670,000
Derbyshire	350,000	150,000
South Wales	850,000	950,000
North „ „	40,000	
Shropshire	250,000	125,000
Lincolnshire	250,000	40,000
Northamptonshire	500,000	25,000
Gloucestershire	150,000	100,000
Various	200,000	
Tons	11,575,000	5,068,000

“The modifications in the process of manufacture all point to two chief results—first, the production of a species of cheap steel, or very superior iron, by a scientific mixing of ingredients with the commoner brands of pig iron; and, second, to abridgments, and therefore to savings in labour and material, in the present methods of obtaining manufactured bars and plates. The *Iron Trade Review* says—‘The production of cheap steel from the inferior brands of iron has been often discussed. Several patents have been taken out for it, but so far with only partial success. The nitrate process of Mr. Heaton, now carried on rather extensively at the Langley Mills, near Nottingham, has recently attracted much notice. Several Cleveland makers are at work upon processes for the manufacture of cast steel from common pig iron, and sanguine hopes are entertained that existing difficulties will eventually be cleared away, and that cheap steel will be made at a cost much below that of Bessemer or other steel. Mr. Samuelson has commenced the manufacture of steel by the Siemens-Martin process at the Newport Works, Middlesbro’. The Radcliffe process of manufacturing iron has received considerable attention. It much simplifies the manufacture of finished iron.’

“The Bessemer patent expires in 1870, and will, it is believed,

reduce by 1*l.* per ton the present price of (say) 13*l.* per ton for Bessemer rails. Any discoveries which should render it possible to obtain steel at near the present cost of iron would be almost an industrial revolution. It would substitute for the present very imperfect material of ordinary iron, a product many times more enduring, trustworthy, and manageable and would be in its rapid consequences one of the most beneficent advances hitherto made in the application by science of the resources of nature.

“While speaking of the applications of science to purposes of practical life, we may refer to the details given in Appendix (W) of the probable course of Engineering enterprise in 1869 and subsequent years. It is tolerably clear that a large amount of capital will be absorbed either as municipal loans or in the ordinary joint stock form to the utilisation of sewage. The practical results already fully established at Croydon, Aldershot, Leamington, Edinburgh, Carlisle, and many other places, have removed all doubt of the commercial value of town sewage as a fertiliser when judiciously applied. The commission on the pollution of rivers will certainly lead in a year or two to stringent legislation against the admission of urban drainage into ordinary water courses, and the result will be a very rapid extension of schemes of sewage irrigation. Ocean Telegraphy is another of the recent fields of enterprise, and we print at foot two paragraphs,* which indicate new means of facili-

* “A new method of transport has lately been adopted in Leicestershire for conveying stone from Messrs. Ellis and Everard’s granite quarry to the railway, a distance of three miles. The plan has been worked out by Mr. Hodgson, C.E., and consists in the employment of an endless wire rope, supported on pulleys, which are carried at a considerable height from the ground on stout posts, the entire arrangement having much the appearance of an ordinary telegraph line. A portable steam-engine drives the rope at about five miles an hour, and it carries with it a continual stream of boxes, each holding 1 cwt. of stone. The rope is endless, so that the full boxes travel at one side of the supports, and the empties return at the other, and the pendants by which the boxes are hung are specially formed to allow of their passing the points of support, which they do with perfect ease. This line crosses the country boldly, as an ordinary telegraph would, and from its cheapness, the rapidity with which it can be constructed, and the ease with which it can be moved, it seems probable the method will be found of considerable use in the development of the resources of new countries as a kind of precursor to the railway system.

“In March, 1868, the formation was mentioned of a limited company in *Australia*, called the Melbourne Meat Preserving Company. After the delay necessary for importing machinery and plant, and erecting buildings, the factory, it appears, commenced operations on the 18th of September, and has since been constantly at work. Thirty-five thousand sheep have been slaughtered, and 54,000 canisters of meat and 190 tons of tallow have been shipped to the company’s agents in London, while 50,000 more canisters were in process of being filled. Confident expectations seem to prevail that the meat, as reported on by the Duke of Edinburgh, will come into extensive use, especially for ships. Several additional companies were actively engaged in making consignments of preparations by various other processes, and boiling down for tallow was again being largely resorted to. It is estimated that there are 45,000,000 sheep on the continent of *Australia*. In Melbourne fat sheep were selling at 4*s.* each for ewes, and 5*s.* to 7*s.* each for wethers. In the country districts of Victoria, good sound two-year-old ewes were sold with difficulty at 3*s.* 6*d.*, and fat wethers at 5*s.*

tating production and of bringing into profitable use the resources of partially settled countries.

“ VII.

“ The election of General Grant as President of the United States, in succession to Mr. Johnson, whose term of office expires in March (1869), has greatly simplified the aspect of American politics. There is a reasonable expectation that Grant’s policy will be firm and moderate, and chiefly directed towards the practical measures necessary to restore a good understanding between the different territorial interests and political parties in the Union, and also to re-establish a firm and economical central control. The price of gold remains at about 135—that is to say, the forced paper currency is depreciated about 33 per cent. If we are right in the views expressed *ante* regarding the slow expansion of the American cotton crop, it is to be apprehended that the resumption of specie payments is still remote. We print in the Appendix (T) one or two remarkable papers from the New York *Commercial Chronicle*, intended to show on careful data that the present coin resources of the Union are not more than 32 millions sterling. We also print in Appendix (S) an abstract of the report of Mr. David Wells, the special commissioner of the treasury, pointing out the manifold defects of the present revenue system of the Union.

“ Specie payments will only become possible in the United States under three sets of circumstances, viz.:—(1) by the exports from the Union so far exceeding the imports as to occasion the receipt of large bullion remittances in discharge of the balance; (2) by the contraction of a loan large enough to redeem a considerable portion of the present depreciated paper; (3) by the enforcement of a scheme of taxation so vigorous as to create a surplus sufficiently ample to effect rapid reductions in the paper currency. So long as the cotton crop remains under 3 millions of bales, it is scarcely possible that it can contribute much towards the restoration of the specie standard. But a general retrenchment of expenditure over the American community may possibly take place, and produce early and marked diminution in the volume of imports. The probabilities, however, scarcely point to such a result, and it is to be apprehended that the restoration of specie payments is still far in the future. The circumstances of the United States at present are very different from the circumstances of this country after the Peace of 1815. *Then* England was almost the only producing country in Europe. Certainly it was the only country where security and invention had not been disturbed or destroyed by civil war or foreign invasion. And accordingly, after the dire effects of the bad harvest of 1816 had been surmounted, this country became the chief *selling country* in Europe, and naturally therefore the country towards which the gold and silver, liberated at length from hoards and reserves, gravitated as the readiest means of procuring those productions of which for the time England had a monopoly. The United States at present have no such monopoly. Before 1861 they had almost a monopoly in the supply of raw

cotton; but seven years of high prices have raised up a rivalry in India, Brazil, and Egypt, which the Southern States will never be able to extinguish.

“The efforts of the expiring Congress to maintain the national faith is commendable, but the real verdict will rest with two bodies yet to be assembled—namely, first with the new Congress to come into power in March, 1869, contemporaneously with General Grant; and second, with the Congress to be assembled after the decennial census of 1870 has re-adjusted the basis of representation according to the rising or falling population of the several States. It is quite ascertained that the re-distribution consequent on the census of 1870 will give about three-fourths of the votes in Congress to the western and newly settled States—that is, to the regions opposed in interest, sympathy, and tradition to the older Eastern States. There are already abundant indications that the western farmers have no very exact notions of national honour, and we candidly confess that we share the misgivings of those who look forward to the Congress of 1871 with no small apprehension. It is just possible that some unlooked-for tide of prosperity may intervene to lessen the gravity of the crisis, but if no such dispensation comes about the cause of honesty will be in peril.

“VIII.

“The railway companies have been in gradual course of recovery during 1868. The *Great Eastern*, under the competent leadership of the Marquis of Salisbury and a respectable board, has got rid of the disgraceful uproar which used to characterise its meetings, and appears to have at last entered upon a course of steady but slow recovery. The *Brighton Company* is also making progress. The *Midland* has already almost wholly recovered the status it lost in 1867. The *North British* and the *Caledonian* are emerging very slowly from their accumulated difficulties; and the *London, Chatham, and Dover* is still a prey to some hundreds of implacable litigants. The worst crisis however is quite surmounted. The applications for railway bills in the Session of 1869 are by comparison trifling, and there is every indication that for several years to come the existing companies will be left at peace, so far as wanton aggression is concerned. The truth is, that this country is already pretty well supplied with railway communication. The ground is filled up, and the great want is now that the companies in possession shall make a wise and liberal use of the supremacy they have acquired.

“Great progress has been made by several of the larger companies in substituting *Debenture Stock* for the loans falling due at irregular dates, and involving therefore a perpetual worry and expense of renewal. The extinction of this large volume of railway floating debt is a relief of the most important kind to the money market.

“The striking railway event of 1868 has been the energy and gigantic proportions of the policy developed by Russia. In Appendix (R) a description will be found of the systematic scheme of railway extension promoted by the Russian Government; and in Appendix (G) some account is given of the similar railway

extensions in Hungary and Austria, fostered by the new commercial spirit which has sprung up under the enlightened administration of Baron Beust and the restored franchises of Hungary.* Every mile of railway opened in Eastern Europe is a new guarantee given to the progress of civilisation and commerce. Hitherto the harvests of some of the most fertile of the south-eastern provinces of Russia have occupied ten months in reaching St. Petersburg or Riga—that is to say, were three times as far from English markets as the productions of the most distant province of China. Next to the extension of railways in the south-east of Europe, the most powerful means for promoting the advancement of those countries would be the accession of Austria and Hungary to the Zollverein—so as to include within one customs tariff and administration the entire 80 millions of people speaking the German language or subject to German Governments.

“IX.

“The revelation of the finance scandals of 1864-66 has received large additions during 1868. The directors of Overend, Gurney, and Co., Limited, have been committed for trial on a charge of conspiracy to defraud. The directors, or some of them, of Lane, Hankey, and Co., turned into a Company entitled the Merchants Company Limited, have met with the same reverse of fortune.

“Mr. Albert Grant has disappeared from the Credit Foncier, Limited, and has been constrained to repay a considerable sum to the shareholders. Peto and Co. have passed through the Bankruptcy Court. Mr. Shipman, the manager, before its stoppage, of the late Agra and Masterman’s Bank, has been ordered by the Court to pay 30,000*l.* for advances wrongfully made. The National Bank have been condemned by Vice-Chancellor Malins to pay 230,000*l.* to the liquidators of Charles Laffitte and Co., Limited, and four of the directors of the bank have been condemned in damages of the same amount for breach of trust. These are all pregnant examples, and they are only a sample of the style of recu-

* “The following table of imports into Austria during the last three years indicates the stride made by her commerce within that period, and which has been in a great measure consequent on the development of the railway system in extensive districts hitherto comparatively unknown :—

Table of Imports by the Imperial Board of Trade.

	1866.	1867.	1868.
	Cwt.	Cwt.	Cwt.
Coffee and tea	388,887	426,644	467,767
Chemicals and colour materials	301,490	611,609	657,683
Flax, hemp, wool, silk waste, cotton, &c.	1,021,021	1,435,404	1,635,437
Yarns	151,758	174,490	301,916
Cotton, silk, and linen goods	—	137,370	254,692
Machinery	87,766	175,218	436,825
Books	20,486	26,900	28,700
Total	1,971,408	2,987,635	3,783,020

perative litigation which has been prosecuted with amazing vigour by the class of contributories to defunct companies. Still, several of the worst cases, as, for instance, Barned's Banking Company, Limited, at Liverpool, remain hitherto unassailed.

"We give in Appendix (U) the liquidators' report of the failure of the Royal Bank of Liverpool.

"The new Parliament will scarcely be able to avoid passing a really sound Bankruptcy Bill in 1869; and the time cannot be far off when a Ministry of Justice, fortified by the sub-department of a public prosecutor, will effectually take away some of the worst scandals of our present mercantile law.

"The directors of the notorious *Credit Mobilier* of Paris have been compelled to pay 1,440,000*l.* as a contribution towards the losses sustained by the shareholders.

"There has been a virtual cessation in the formation of companies; but public attention has not been sufficiently directed to the defects and vices of the present system of the liquidation of companies ordered to be wound up. The profits of this liquidating business are so great that there cannot be a doubt that in hundreds of cases virtual conspiracies are entered into between accountants and solicitors to force into liquidation companies really able to meet all business claims upon them without any process of law. No bankruptcy legislation will be satisfactory which does not deal with this part of the joint stock system.

"One of the plainest results of the calamities of 1866 is the proof they afford of the almost entire incompatibility of the two functions of contractor and financier. Nearly all the financing contractors—beginning with Peto and Co., and descending to very small people—have been ruined. The theory of the financing contractor was to provide both materials and money for his employers. Railway Company A got their Act and their compulsory clauses, and their power to create so many ordinary shares, so many preference shares, and issue so many debentures. Then came in the financing contractor. His calculation was that the *bonâ fide* price of the work to be done, was (say) 60*l.* if paid in cash, but cash there was none. The 60*l.* had therefore to be taken in debentures and preferences, with so many ordinary shares as a contingent bonus, and the nominal amount of these paper securities given for the 60*l.* might be 100*l.* or 120*l.* or 150*l.*, according to circumstances and the "peculiarities" of the case. It was in this way that the nominal capital of the 110 miles of the London and Chatham and Dover Railway has been run up to 17 millions sterling, when the real cash value of the work and labour done may be less than a third of that amount. The financing contractor having made his agreement for payment in paper, set about raising real money as well as he could, the entire operation being of course a speculation on the amount of net revenue to be earned by the line when really finished. At this part of the history came into play the 'institutions of credit'—Overend and Co., the Imperial Mercantile Credit, the London Financial Association, the Joint Stock Discount Company, the Bank of London, Barned's Bank, and the rest. These enterprising bodies lent the cash obtained from their shareholders and depositors

on the promissory notes and securities offered by the contractor, and when all the actual cash was gone ingenious devices of having bills of exchange—close imitations of the ordinary trade bills—drawn abroad, were plentifully employed, with a view of getting money in the discount market. Meantime the lines of railway were being gradually discovered to be mistakes; and in the course of a short time, as we all know, the financing contractor broke down; the works were stopped in the middle of a tunnel or halfway over a valley; the debentures and preferences were waste paper; the contractor became a bankrupt, paying a dividend a few farthings in the pound; and the Finance Company, passing into the hands of a liquidating attorney and accountant, proceeded at a rapid pace to call up every sixpence of the remaining capital.

“The lesson to be learnt from all this is simply—that as soon as the contractor starts financing he becomes a dangerous person. His real function is to build for cash prices. The persons employing him must provide that cash, and it is precisely the obligation of finding it which will restrain them from setting on foot speculative and chimerical projects. The experience of 1866 has rendered familiar a new class of unsound and reprehensible securities—namely, the ‘finance bills,’ which in all sorts of shapes had been in large circulation during the previous three years.

“X.

“It is quite doubtful whether during 1866, 1867, and 1868, this country has added much to its Accumulated Wealth. In ordinary years the actual savings are perhaps nearer 200 than 100 millions sterling. But during the last three years scarcely any important trade has been profitable. The cotton manufacturers are certainly as a body poorer. They have carried on their mills in a large proportion of cases at the expense of capital. The same is true, but not quite to the same extent, of the iron trade. Shipping has been comparatively unprofitable. The large importing trades have been unfortunate. Railway property and railway dividends have extensively fallen off—in many cases disappeared altogether. The cattle plague has nearly ruined several counties—Cheshire for example. The bad harvests of 1866 and 1867 have imposed a special tax on the country of perhaps 50 millions sterling. The building trades have been bad, and the owners of house and shop property have had great difficulty in finding tenants at adequate rents. Besides all these sinister influences there have been the effects of the positive waste of scores of millions of capital in the idle and profligate schemes of the prosperity years. The millions for example spent on the London, Chatham, and Dover Railway, and in the class of superfluous lines of which it is the type, are all as completely wasted as if fired away in shot and gunpowder. So are the vast amounts of capital dissipated by the wretched stupidity of Overend and Co., and the financing banks and companies. Against all these causes of loss must be set on the other side an unknown but very potent quantity—that is to say, the results of severe retrenchment exercised in a country like this by the higher and middle classes. Saving goes on at a great rate when a population of thirty millions

of energetic people fairly address themselves to effect it; and something like such an effort has been in progress since the calamities of 1866. Nor has the saving been limited to mere personal expenditure. It has been most rigidly applied to every manufacturing process. The cry has been and is for economy of production and efficiency of service, and we are justified in expecting that 1869 and 1870 will exhibit some of the reviving consequences of this severe course of national self-examination. One larger result will scarcely fail to be permanently secured—namely, the creation of a fixed public opinion in favour of such a change in the present character of popular education as will render it better adapted to boys and girls who have to live by wages earned in useful trades. The education must become less literary and theological, and more economic and industrial—that is to say, must deal plainly, and as fully as may be practical, with the kinds of knowledge which relate to wages, health, production, and technical skill.

“XI.

“Very little has been heard for a long time of the alarms which prevailed extensively twelve or fourteen years ago, regarding the then apprehended depreciation of gold. Latterly the fear has been rather of an opposite kind—for, as will be seen by the following Table (IX), the annual supplies of gold from new sources are sensibly declining.

(IX).—*Gold and Silver. Total Average Annual Production (partly estimated) in Periods of Years, 1849-68.*

[00,000's omitted, thus 13,5 = 13,500,000Z.]

Years.	Periods of Years.	Gold.			Silver.		
		Old Sources.	New Sources.	Total.	Old Sources.	New Sources.	Total.
		Mln. £	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £
3	1849-51.....	13,5	10,3	23,9	15,5	—	15,5
5	'52-56.....	14,0	24,7	38,7	16,1	—	16,1
3	1857-59.....	14,6	21,9	36,5	16,1	1,0	17,1
4	'60-63.....	15,3	18,3	33,5	15,2	3,0	18,2
5	1864-68.....	15,6	14,4	30,0	15,0	4,5	19,5
20	Total	292,	365,	657,	309,	36,	345,
20	Annual average	14,	18,	32,	15,	2,	17,

“The falling off in the supplies from new sources—that is, Australia, New Zealand, California, and British Columbia—at present is more than 40 per cent. as compared with the maximum period 1852-56. In Appendix (Q) will be found the official report of the Victorian (Australia) gold mines for 1867; and also a statement of the production of gold and silver in California. In

Victoria the decrease in the number of miners and the increase in their average earnings is remarkable. Thus—

Victoria (Australia). Number of Gold Miners and the Average Earnings of Each, 1859-67.

Year.	Number of Miners.	Average Earnings.	Year.	Number of Miners.	Average Earnings.
		£ s. d.			£ s. d.
1859 ...	125,764	—	1864 ...	84,986	74 1 9
'60 ...	108,562	79 9 3	'65 ...	79,457	74 4 2
'61 ...	100,463	74 15 11	'66 ...	70,794	80 8 3
'62 ...	93,379	67 17 10	'67 ...	63,053	87 1 7
'63 ...	92,994	70 9 2			

“The effect of the ‘lottery ticket’ nature of gold mining is curiously apparent in these figures. Probably most of these men could earn more than 87*l.* a-year at any ordinary trade, and so save themselves the untold hardships and disappointments of the gold fields. But then an ordinary trade would not afford any chance of finding nuggets of half a hundred weight each, and of bounding therefore by a single venture to the top of the colonial society. It is the same lottery principle which at home fills the law and church with educated men who work year after year for nothing, and less than nothing, but consoled with the possible reversion of Lambeth Palace and the Chancellor’s robe.

“The maximum and minimum years of *gold* production in Victoria and California have been as follows:—

Place.	Years.	Maximum.	Years.	Minimum.
		£		£
California	1853	11,500,000	1867	5,000,000
Victoria	'56	12,000,000	„	5,700,000
		23,500,000		10,700,000

“The silver mines of Nevada, in California, have been at work since 1859, and the annual produce has already reached 4½ millions sterling, with every probability of large increase. The production of gold in New Zealand is over 2 millions sterling per annum.

“It may be safely affirmed that the present annual supply of 30 millions sterling of gold is no more than sufficient to meet the requirements of the expanding commerce of the world: and prevent that pressure of transactions and commodities on the precious metals, which means in practice insufficient bullion reserves, and therefore high and fluctuating rates of interest, and prices and wages constantly tending towards decline. Let us again point out to persons who take an interest in this subject that there are immense masses of depreciated paper money in Europe and America, which sooner or later must be replaced in a large degree

by gold and silver. Russia, Austria, Italy, Turkey, Greece, Spain, are all overrun with notes of forced circulation. The United States, Brazil, Buenos Ayres, and nearly all the South American countries, are in the same condition. In India only (see Appendix V) has a system of sound paper currency been established, which in the course of twenty or thirty years may by remote possibility lead to a real economy of coin in that country. At present the bank notes are less than 10 millions sterling, probably not a thirtieth part of the entire circulation of the Presidencies. It is true that the prices of many commodities seem to be higher than before 1850, but the disturbing causes which have been in constant operation must be remembered—wars in India, China, Europe, and North and South America, the cessation of slave labour, rebellion in China, serf-emancipation in Russia, and fifty other causes, all tending to disturb former methods of production; and besides all this, there has been a most sensible elevation in the general standard of living. The same income applied rigidly to the same wants as twenty years ago would give the same results; but the present difficulty consists, in perhaps the largest degree, in the catalogue of wants having been expanded by the inclusion of many things which were hitherto luxuries. A recent writer (M. Bonnet) in the *Revue des Deux Mondes* (15th November, 1868) has insisted upon these points in an essay which will produce useful results, especially in France, where the tendency of opinion has inclined to the opposite side. The real danger is that the present supplies of gold should fall off, and among the greatest and most salutary events that could now occur would be the discovery of rich gold deposits in three or four remote and neglected regions of the earth—South Africa, for example, from which indeed some indications of gold have lately come; Asia Minor, Northern Australia, or Birmah. Nothing short of the attraction of a gold field will effectually open up these fertile regions for scores of years.

“We close our review of 1868 with the consoling reflection that it is perhaps the last of a dark series. We enter on 1869 with prospects not brilliant in any degree, but with a reasonable probability of being able before next year arrives to say that our population are better employed, fed, and clothed, than since 1865.”

Much and important information is given in the appendix to the original; for lack of room, only the titles of each part can be given here, but they give some indication of their nature and contents.

A.—Wholesale Prices of Commodities in London and Manchester :
Average of Six Years, 1845-50 : Selected dates, 1851-67 :
and Monthly, 1868.

B.—Foreign Exchange, 1841-68.

C.—Wholesale Prices, 1845-68 : Proportionate Results.

D.—Bank of England : Weekly Return.

E.—Bank of France.

F.—Imports of Gold and Silver, in Millions Sterling, into the United Kingdom, 1863-68.

F.—Exports of Gold and Silver, in Millions Sterling, from the United Kingdom, 1863-68.

G.—Commercial Progress in Austria and Hungary: 1867-68.

H.—United Kingdom: Imports and Exports of Gold and Silver Bullion and Specie in the Years 1867-68.

I.—Gold and Silver, 1851-68: Exports to Egypt and the East, from United Kingdom, &c.

J.—Prices of Grain: England and Wales: Calendar Year.

K.—Financial and Commercial Events, 1868.

L.—Agricultural Returns in Great Britain and Ireland for the Year 1868.

M.—The January (1869) Meetings of the London Joint Stock Banks.

N.—The London Discount Companies.

O.—Statistics of the London Bankers' Clearing House, 1867-68.

P.—Banking in Scotland, 1868.

Q.—Gold Mining Statistics of Victoria, 1867-68.

R.—The Rapid Railway Extension in Russia.

S.—United States: Report of December, 1868, by Mr. David Wells, Special Commissioner of the Revenue.

T.—United States: Schemes of resuming Specie Payments: Estimates of Resources in Coin and Bullion.

U.—Failure (in October, 1867) of Royal Bank of Liverpool: Report of Liquidators, 28th November, 1868.

V.—Progress of Bank Note Circulation in India: Official Report for Year ended 31st March, 1868.

W.—Probabilities of Engineering Progress and Undertakings in 1869.

X.—Revelations of Finance Mongering, 1865-66.

II.—*General Election*, 1868.

[THE Editor has collected from the newspapers (*Daily News* and *Standard*) of the two leading political parties, the following four collections of facts relating to the General Election, 1868—the first election

under the enlarged suffrage. Several passages of mere party complexion have been omitted from the articles. It is considered desirable to preserve these statements, as exhibiting the manner in which the same class of facts were regarded by contemporaries of opposite politics.]

I.

From the *Standard* of the 5th December, 1868 :—

- “ 1. The great centres of population and intelligence have unmistakably expressed themselves in favour of Conservatism. Lancashire, which in 1865 returned three Conservatives and two Liberals, has in 1868 returned eight Conservatives. Middlesex, which returned two Liberals last election, has now sent but one, and that one would not have been elected had a second good Conservative been started. In Cheshire, Derbyshire, Devonshire, Kent, Lincoln, Norfolk, Somerset, Surrey, and York, the new seats have been seized upon by the Conservatives. In addition, one of the old seats in Cumberland, Derbyshire, Kent, Nottingham, Rutland, Salop, Surrey, Sussex, and Worcester, have followed the same example.
- “ 2. Mr. Disraeli saw that the minority principle would work against his party. Having the majority in Liverpool and Manchester, the Conservatives should have got the six seats there instead of three. They had one in Leeds, which they retained, and would have gained one in London. Under this clause they have lost six seats, one each in Berkshire, Buckinghamshire, Cambridge, Oxford, Hereford, and Dorset.
- “ 3. Notwithstanding these gains to the Liberals, there are thirteen counties in England that have not elected a Liberal, while there is only one (Cornwall) which has not elected a Conservative.
- “ 4. The *English counties* (containing nearly one-half of the population of the United Kingdom) have increased the number of *Conservative* representatives from 94 in 1865 to 126 in 1868 : while the Liberals have lessened theirs from 50 in the former years to 46 in 1868. Had the minority principle not applied in the counties, it would have given the Conservatives six additional seats.
- “ 5. The *counties for the United Kingdom* have returned 168 Conservative members in 1868 against 144 in 1865, while the Liberals, who returned 108 in 1865, return 114 in 1868 ; they lost four seats in England, but gained three in Wales, one in Scotland, and four in Ireland.
- “ 6. The *boroughs of the United Kingdom*, which returned 138 Conservative members in 1865, only returned 102 in 1868. These constituencies returned 273 Liberals in 1865, and only 263 in 1868. The loss to the Conservatives upon these constituencies was thirty-two, and to the Liberals ten.
- “ 7. This loss took place in the *small*, not the large constituencies. *Cities and towns* of upwards of 30,000 inhabitants have increased the number of Conservative representatives by six, while the Liberals have only increased theirs by five ; in *towns* with a population between 15,000 and 30,000, the Conservatives gained one seat and the Liberals three seats ; while in towns of under 15,000, the Conservatives have lost forty-three seats and the Liberals only twenty. The numbers stand thus :—

	Conservatives.		Liberals.	
	1865.	1868.	1865.	1868.
Towns upwards of 30,000	28	34	104	109
„ 15,000 to 30,000	16	17	68	73
„ under 15,000	94	51	101	81
Total	138	102	273	263

The representatives of the *smaller towns* formed 68 per cent. of the Conservative strength in 1865, and only 50 per cent. in 1868, while those representatives which were 37 per cent. of the Liberal strength in 1865, are 31 per cent. in 1868.

“ 8. There is a tendency in new borough constituencies to go with the reformers; hence the Conservative gains in the towns between 15,000 and 30,000 inhabitants have not been so great as their opponents.

“ 9. The Conservatives have not lost ground in *England*, but the Liberals have. The former had 221 seats in 1865; they have the same number now. The Liberals had 253 English seats in 1865; now they have only 241. Their gains have been in the other parts of the empire; their losses have been in England.

“ The electoral returns of 1865 and 1868 show the following results :—

	Conservatives.		Liberals.	
	1865.	1868.	1865.	1868.
<i>England—</i>				
Counties	94	126	50	46
Boroughs	123	91*	202	194*
Universities	4	4	—	1
Total	221	221	252	241
<i>Wales—</i>				
Counties	9	6	6	9
Boroughs	1	2	12	13
Total	10	8	18	22
<i>Scotland—</i>				
Counties	10	9	19	22
Boroughs	—	—	23	26
Universities	—	—	not	elected†
Total	10	9	42	48
<i>Ireland—</i>				
Counties	31	27	33	37
Boroughs	14	11	25	28
University	2	2	—	—
Total	47	40	58	65
<i>United Kingdom—</i>				
Total	288	278	370	376

* Horsham, double return, one seat.

† Not included, Orkney and Scotch universities, three seats.

“ The aspect of these returns, as regards population and representation, is shown in the following table :—

	Conservatives.		Liberals.	
	Members.	Population.	Members.	Population.
<i>Counties—</i>				
England	126	7,424,650	46	3,173,084
Wales	6	272,561	9	495,799
Scotland	9	298,732	22	1,505,748
Ireland	27	2,277,989	37	2,703,900
Total	168	10,273,932	114	7,878,531
<i>Boroughs—</i>				
England	89	1,973,396	196	6,409,245
Wales	2	27,412	13	317,687
Scotland	—	—	26	1,292,328
Ireland	11	229,403	28	464,065
Total	102	2,480,211	263	8,483,325
Boroughs and counties United Kingdom }	270	12,754,143	377	16,361,856
Universities	6	—	1	—
	276	—	378	—

“ The total population of the counties is 18,152,463, and the total population of the boroughs 10,963,536. The former have only 282 representatives, while the latter have 365. Were the representation distributed according to population, the counties should have 403 members and the boroughs only 244. Supposing that such a redistribution had been made, and that each party had returned its representatives in the same proportion, the return would stand thus:—

Number of Members.		Conservatives.	Liberals.
403	Counties	240	162
244	Boroughs	69	176
647		309	338

“ These figures show the weight of public opinion as expressed in the elections.

“ This view is supported to a certain extent by the following summary of the number of *members and the population* in each part of the United Kingdom:—

Boroughs and Counties.	Conservatives.		Liberals.	
	Members.	Population.	Members.	Population.
England	215	9,398,046	242	9,582,329
Wales	8	299,973	22	813,486
Scotland	9	298,732	48	2,798,076
Ireland	38	2,507,492	65	3,167,965
Universities	6	—	1	—
	276	12,754,143	378	16,361,856

II.

From the *Daily News* of the 3rd December:—

“The contests throughout the General Election of 1868 have been more numerous than at any election which has taken place for very many years. Of the 493 members who sit for constituencies in England and Wales, 377 have had to fight for their seats, and 116 have been returned unopposed—70 in thirty-seven counties, and 46 in thirty-eight towns.

“The *counties* in which there have been *no contests*, are Anglesea, Bedford, Brecknock, Bucks, East and West Cheshire, East and West Cornwall, West Cumberland, Dorset, West and South Essex, Flint, Glamorgan, East Gloucester, North Hants, Huntingdon, North and Mid Lincoln, Merioneth, Montgomery, West Norfolk, North Northampton, North and South Northumberland, North and South Notts, Oxford, Pembroke, Radnor, Rutland, West Somerset, West Sussex, Westmoreland, South Wilts, West Worcester, and the northern division of the West Riding.

“The *uncontested boroughs* were Bridport, Calne, Cardigan, Dorchester, Dudley, East Retford, Eye, Flint, Grantham, Harwich, Huddersfield, Huntingdon, Kendal, Launceston, Lincoln, Liskeard, Malton, Marlborough, Middlesborough, Montgomery, Morpeth, Newport, Petersfield, Radnor, Shaftesbury, Shoreham, Stamford, St. Ives, Stoke-on-Trent, Swansea, Tavistock, Tiverton, Tynemouth, Walsall, Wenlock, Wilton, Wolverhampton, and Wycombe.

“The *total number of votes polled* for candidates in England and Wales has been 2,055,507, of which 1,231,450 have been given for Liberals, and 824,057 for Conservatives. There is thus a balance in favour of the Liberals of 407,393 votes. There are 265 *Liberal members*, 59 of whom obtained their seats without a contest. Thus the 1,231,450 votes, divided between the 206 Liberal members who fought for their seats, give to each an average of 5,978. Of the 227 *Conservative members* for England and Wales, 57 did not fight for their seats, and dividing the 824,000 votes between the 170 who did fight, there is an average of 4,847 votes to each. The Liberals have thus a balance in England and Wales of 1,131 votes for each M.P. who underwent a contest.

“Of the fifty-seven seats in *Scotland* which have been filled up to this time, twenty-six, in the proportion of sixteen county to ten borough seats, were not contested. The counties which thus escaped the turmoil of a political struggle are East and West Aberdeen, Argyll, Banff, Berwick, Clackmannan, Dumbarton, Elgin and Nairn, Forfar, Inverness, Kincardine, North Lanark, Renfrew, Ross and Cromarty, Stirling, and Sutherland. The towns, Aberdeen, Edinburgh, Elgin, Haddington, Hawick, Inverness, Kirkcaldy, Perth, and St. Andrews. The *total number of votes polled* for candidates has been 123,410 for the Liberals, and 23,391 for the Conservatives. The Liberal balance of votes in Scotland, is, therefore, 100,019. Of the fifty Liberals returned in Scotland up to this time, twenty-three obtained their seats without a contest. Dividing the 123,000 Liberal votes between the twenty-seven members who fought for their entry into Parliament, an average of 4,645 falls to each. Of the seven Conservative members returned for Scotland, only four fought for their seats, and dividing between them the 23,391 Conservative votes given, each would represent 5,848. When, however, we deduct from the total number of Tory votes, the 10,814 given to the unsuccessful candidate at Glasgow, it is seen that each of the Conservative members who fought a contest, represents only 3,144 votes, or 1,500 under the average given for the Liberal members.

“*Ireland* returns 105 members, in the proportion of 66 Liberals to 39 Conservatives. No less than sixty-nine seats in the sister island have been uncontested, fifty-six in the counties and thirteen in the towns. The *uncontested counties* were Antrim, Armagh, Carlow, Cavan, Clare, Donegal, Down, Fermanagh, Galway, Kerry, Kildare, Kilkenny, King’s County, Leitrim, Limerick, Londonderry, Longford, Louth, Mayo, Monaghan, Queen’s County, Roscommon, Tipperary, Tyrone,

Wicklow, Waterford, Westmeath, and Wexford. The boroughs in which there were no contests were Armagh, Clonmel, Coleraine, Downpatrick, Dungannon, Ennis, Kilkenny, Kinsale, Lisburn, Mallow, New Ross, Tralee, and Wexford. The number of votes given in Ireland was 89,461, in the proportion of 53,379 for Liberals, and 36,082 for Conservatives. There was thus a balance in favour of the Liberals of 17,297. Of the sixty-six Liberals returned, only twenty-two were called upon to do battle for their seats, and dividing between them the 53,379 votes, each would represent an average of 2,426. Of the thirty-nine Conservative members, only twelve fought their way into Parliament, so that each represents an average of rather over 3,000 votes. This is a somewhat higher proportion than that represented by the Liberals; but it must be remembered that Sir Arthur Guinness, M.P. for Dublin, represents 11,000 Tory votes, and that Mr. William Johnston, one of the members for Belfast, represents the like number, as there were three Conservative candidates for that borough.

“ Throughout the elections the highest number polled was by Mr. Dalglish, at Glasgow, who came in at the head with 18,281. The highest number recorded for an unsuccessful candidate exceeded 15,000, and this number was polled by Mr. Massey, at Liverpool. The lowest winning number is shown by Captain Dawson Damer, at Portarlington—68.

“ Distinguishing the three kingdoms, the following table shows the *total number of votes recorded on each side*, with the Liberal balance:—

	Liberal Vote.	Conservative Vote.	Liberal Majority.
England and Wales	1,231,450	824,057	407,393
Scotland	123,410	23,391	100,019
Ireland	53,379	36,082	17,297
	1,408,239	883,530	524,709

“ The ninety-two constituencies gained by the Liberals throughout the elections, contain a *population* of 6,611,950, while the sixty-nine won by the Conservatives, contain a population of 5,177,534. The balance on the side of the Liberals is therefore 1,434,416.”

III.

From the *Daily News* of 3rd December also:—

“ Stated broadly, there were 509 Reformers and 149 Tories returned to the *first reformed Parliament*, 1832. In reality, not more than 400 members could be classed as consistent followers of Earl Grey. Upwards of 100 were Liberals who clamoured for changes, some of which were impracticable and others mischievous. Ireland sent thirty-eight representatives pledged to demand the repeal of the union. These men united with the professed independent members, embarrassed the ministry by vexatious motions, and aided the Tories to obtain victories which their numerical strength was inadequate to achieve. The result was to give the king an opportunity, on the elevation of Lord Althorp to the peerage, in 1834, to dismiss his ministers and summon Sir Robert Peel to his councils. After an existence of one year and eleven months, the first reformed parliament was dissolved, and Sir Robert Peel called for the verdict of the country. The consequence of this appeal was equivalent to a condemnation of his administration and its policy, for the liberal majority was fifty-four. This was not an overwhelming but a compact and working majority. The Liberal party was again consolidated, the men of crotchets having been banished to a merited obscurity.

“ Little more than a month after the *second reformed Parliament* had met at the bidding of a Tory premier, Lord John Russell moved the first of the many notable resolutions by which Liberals have pledged themselves to remove the

grievance of an alien church in Ireland, defeating the ministry by a majority of sixty-seven. Soon afterwards the Liberals returned to power, only to find themselves hampered in their schemes by the obstinate opposition of the House of Lords. In 1837 they appealed to the country, and found that the country was not then ripe for the measures they had proposed. They met Parliament with the small majority of sixteen in their favour. Another dissolution took place in 1841, under the premiership of Viscount Melbourne, when the Tories triumphed, a Tory majority of eighty-two being obedient to the leadership of Sir Robert Peel. The accession of Sir Robert to office did not, however, lead to a turning backwards on the highway of progress, because it was when heading this strong force of supporters that he performed his most heroic achievement—repealed the corn laws—and immortalised his name.

“The next general election took place in 1847, when Lord John Russell was premier, and parties were in a state of utter confusion. The adherents of the Government formed one party. The personal followers of Sir Robert Peel constituted another. Those who gloried in the name of Protectionists, rallied to the standard of Lord Derby. Strictly speaking, the liberal majority was eighteen only. This implied, what was accounted an impossibility, a coalition between the Peelites and the Protectionists, yet it is not wonderful that, under these circumstances, the Government should have been insecure. On unimportant questions it underwent defeats which were humiliating rather than disgraceful. The end came by a final resignation, which was preferable to a continuance in office without the power of effecting necessary changes. Lord Derby assumed office in 1852 for the purpose of giving scope to his declared policy, but an adverse majority of thirty-nine made him reconsider his position. Several changes of ministry followed, the end being that Lord Palmerston became first minister of the crown. Strong in the consciousness of his strength, he appealed to the country in 1857, when his policy with regard to China was seriously called in question, and had the anticipated response in a majority of eighty-seven members. His imprudence alienated these supporters, and Lord Derby again became Premier of England. He dissolved Parliament in 1859, and was placed in a minority of fifty-one. Of this Lord Palmerston took advantage, and secured his return to the premiership, an office which he filled till his death. Shortly before he died, Parliament, in July, 1865, was dissolved, having come to the end of its term, and the Liberal party returned, reinforced with a majority of seventy-four. How this was diminished, owing to the secession of some, and the eccentricity of others, during the premiership of Earl Russell, must be fresh in the memory of every reader. It was not till the Tories had thereby been restored to office, and put to the crucial test by Mr. Gladstone when he moved the disestablishment and disendowment of the church in Ireland, that a liberal majority of sixty-six was secured. For the third time during the past sixteen years, and for the *fourth* since the passing of the first Reform Act, the country has been appealed to emphatically. The minimum majority in favour of Mr. Gladstone (in 1868) and the policy of the party which he leads is 107.

“The most fitting conclusion to this summary is the reproduction, in a tabulated form of the figures quoted above:—

Date of General Election.	Premier.	Reformers.	Tories.
1832	Earl Grey..... Liberal majority, 360	509	149
'35	Sir Robert Peel Liberal majority, 54	356	302
'37	Viscount Melbourne Liberal majority, 16	337	321
'41	Viscount Melbourne Tory majority, 82	288	370

Date of General Election.	Premier.	Liberals.	Peelites.	Protectionists.
1847	Lord John Russell	338	120	200
'52	Ministerial majority, 18 The Earl of Derby	339	—	319
	Liberal majority, 20			

Date of General Election.	Premier.	Liberals.	Tories.
1857	Viscount Palmerston	371	287
	Liberal majority, 85		
'59	The Earl of Derby	353	302
	Liberal majority, 51		
'65	Viscount Palmerston	366	292
	Liberal majority, 74		
'68	Right Hon. B. Disraeli	—	—
	Minimum Liberal majority, 107		

IV.

From the *Daily News*:—

“ The returns to the Reformed Parliament (1868) must have effectually dispelled the apprehensions of those who feared the unchecked rule of the democracy. The ‘ great governing families ’ have lost little, if any, of the influence which they possessed in the House elected under the more restricted franchise. Some noble houses have suffered losses, but these have been counterbalanced by the victories of others. The house which has suffered most severely is that of *Cavendish*. In the last Parliament there were the Marquis of Hartington for North Lancashire, Lord F. C. Cavendish for the North-West Riding, Lord E. Cavendish for East Sussex, and Lord George Cavendish for North Derbyshire. The four have been reduced to two; and the Marquis of Hartington and his brother, Lord Edward, are for the time excluded. The *Duke of Abercorn* has still the satisfaction of seeing two sons and a brother in the House of Commons, the defeat of Lord C. J. Hamilton in Londonderry having been balanced by the election of his younger brother for Middlesex. The family of the *Marquis of Ailesbury* is still represented by two members—Lord Charles Bruce in North Wilts, and Lord Ernest at Marlborough. There are two members of the noble house of *Russell*—Mr. Hastings in Bedfordshire, and Mr. Arthur at Tavistock; while Lord Amberley, who went from Nottingham to South Devon, has lost his seat. *Lord Derby’s* two sons are still in the House, Captain Stanley, the younger, now sitting for North Lancashire. The eldest son of the *Duke of Buccleuch* has been defeated in Midlothian; but his younger brother, Lord Henry Scott, was more fortunate; he now sits for South Hants, his former constituency, the county of Peebles, having been united to that of Selkirk. The two members of the *Cowper* family are still in the House—the Right Hon. William Francis for South Hants, and the Hon. Henry Cowper for Hertfordshire.

“ The *Earl of Lonsdale*, now 81 years of age, still sees four representatives of Lowther Castle in the House of Commons. These are Colonel Lowther, heir presumptive to the title, who sits for West Cumberland, Mr. William Lowther, M.P. for Westmoreland, Mr. James Lowther, the Conservative member for the city of York, and Mr. Cavendish Bentinck, the elect of the burgesses of Whitehaven. There are again four *Egertons*, who will invariably vote with the Conservatives, the Hon. Algernon Fulke, for South-East Lancashire; Mr. Edward Christopher for East

Cheshire; Sir Philip de Malpas Grey, for West Cheshire; and the Hon. Wilbraham, for Mid Cheshire. For once, however, there is a Liberal member in the House bearing the name of Egerton. He has been sent, in company with the Hon. H. Strutt, from the new division of East Derbyshire. Lords John and George Mannors, for North Leicester and Cambridgeshire respectively, continue to remind us that the *Duke of Rutland* has two brothers in the House of Commons. The *Leveson-Gowers* have held their own—Lord Ronald in Sutherlandshire, and the Hon. Edward Frederick at Bodmin. So also has the house of *Tredegar*, two members of the family of Morgan having again been returned for the counties of Brecknock and Monmouth. Colonel Poulett Somerset was successful in Monmouthshire, while Colonel E. A. Somerset, after a twelve months' tenure of his seat, has been ejected from West Gloucestershire. The *Grosvenor* family is still represented by three members—Earl Grosvenor at Chester, Lord Richard in Flintshire, and the Hon. Robert Wellesley in Westminster. The eldest son of *Earl Fitzwilliam* continues to represent the southern division of the West Riding, and the Hon. C. W. Fitzwilliam again sits for Malton. The Hon. Charles Howard has come in once more for East Cumberland, while Lord Edward has been defeated at Preston. The Earl of *Enniskillen* has the satisfaction of seeing his second son again the representative of Fermanagh, while in Enniskillen his third son has given place to Lord Crichton, eldest son of the Earl of Erne.

“Two brothers of the *Duke of Newcastle*, who sat in the last Parliament, Lord E. P. Clinton for North Notts, and Lord Arthur for Newark, did not offer themselves for re-election. Two sons of *Lord Leconfield* are again in the House—the Hon. Henry Wyndham for West Sussex, and the Hon. Percy Scawen for West Cumberland. Of the members of the *Feversham* family, Admiral Duncombe abandoned the East Riding to stand for Leeds, where he was defeated, and Colonel Duncombe has been re-elected for the North Riding. The two brothers of the *Duke of Richmond*, Lord Henry Lennox at Chichester, and Lord George at Lymington, have retained their seats after contests. Lord Mayo has left Cocker-mouth, but a member of the family of Bourke has come in for King's Lynn. A division of Kent has remained faithful to Lord Holmesdale, Tipperary to the Hon. Captain White, Cavan County to the Hon. Hugh Annesley, Argyllshire to the Marquis of Lorne, South Wilts to Lord H. F. Thynne, North Shropshire to Lord Newport, West Suffolk to Lord Augustus Hervey, the county of Galway to Viscount Burke, Kilkenny County to the Hon. L. F. Agar-Ellis, Dorset to the Hon. W. H. Portman, South Shropshire to General Percy Herbert, the two divisions of Northumberland to a Percy and a Liddell, and a division of Essex to Lord Eustace Cecil. Other counties return members of the houses of Strafford, Walsingham, Wemyss, Buller, Fitzgerald, Gainsborough, Hardwicke, Headfort, Henniker, Howe, Lucan, King, O'Neill, Ormathwaite, Downshire, and Lyttelton.

“The members of noble houses who sit for boroughs are considerably fewer in number. Amongst them, exclusive of those already mentioned, are Mr. Berkeley for Bristol, Mr. Villiers for Wolverhampton, Colonel Crichton-Stuart for Cardiff, Lord Pelham for Lewes, Lord Bury for Berwick, Mr. Denman for Tiverton, Mr. Hanbury-Tracy for the Montgomery Boroughs, Captain Vivian for Truro, Mr. Arthur Kinnaid for Perth, Mr. Cadogan for Crickdale, Mr. Tollemache for Grantham, Lord Sandon for Liverpool, Colonel Edwardes for Haverfordwest, and Lord St. Lawrence for Galway. Mr. Bathurst retains his seat at Cirencester, Captain Carrington at Wycombe, Mr. Dudley Fortescue at Andover, Sir George Grey at Morpeth, Mr. Bouverie at Kilmarnock, Lord John Hay at Ripon, General Forester at Wenlock, and Major Knox at Dungannon. Lord Courtenay, who in the last Parliament sat for Exeter, now represents East Devon. Altogether the ranks of the aristocracy have suffered little or no diminution from the exercise of the franchise by the householders, the 5*l.* copyholders and leaseholders, and the 12*l.* voters in the English counties.”

III.—Cost of Lancashire Voters per Head.

We obtained the following from the *Times* :—

“As the contests in the Parliamentary elections of November, 1868, for Lancashire were watched with more than ordinary anxiety, the following statement of the number of registered electors in the fifteen boroughs and four divisions of the County ; the official returns of the amount expended on behalf of each candidate ; the number of votes polled for each, and the average cost of each vote, will be interesting to the curious in such matters :—

Boroughs and Candidates.	Registered Electors.	Votes Polled.	Amount Expended.	Average Cost per Vote.	
			£	s.	d.
ASHTON-UNDER-LYNE	4,822				
T. Mellor (C.)	—	2,318	584	5	— $\frac{1}{2}$
T. M. Gibson (L.)	—	2,109	300	2	10
		4,427	884	4	—
BLACKBURN	9,714				
W. H. Hornby (C.)	—	4,907	} 1,269 {	2	7
Jos. Feilden (C.)	—	4,829		2	7 $\frac{1}{2}$
J. G. Potter (L.)	—	4,399	} 1,674 {	3	9 $\frac{1}{2}$
M. J. Feilden (L.)	—	4,164		4	—
		18,299	2,943	3	3
BOLTON	12,653				
J. Hick (C.)	—	6,062	} 1,510 {	2	5 $\frac{3}{4}$
Colonel Gray (C.)	—	5,848		2	6 $\frac{3}{4}$
T. Barnes (L.)	—	5,451	} 974 {	1	9 $\frac{1}{4}$
S. Pope (L.)	—	5,436		1	9 $\frac{1}{2}$
		22,797	2,484	2	3
BURY	5,583				
R. N. Phillips (L.)	—	2,830	1,422	10	— $\frac{1}{2}$
Viscount Chelsea (C.)	—	2,264	818	7	2 $\frac{3}{4}$
		5,094	2,240	8	9
BURNLEY	5,862				
R. Shaw (L.)	—	2,620	1,538	11	8 $\frac{3}{4}$
Sir J. Y. Scarlett (C.)	—	2,238	1,067	9	6 $\frac{1}{2}$
		4,858	2,605	10	9
CLITHEROE	1,595				
R. Assheton (C.)	—	760	552	14	6 $\frac{1}{2}$
C. S. Roundell (L.)	—	693	520	15	—
		1,453	1,072	14	9
LIVERPOOL	39,637				
S. R. Graves (C.)	—	16,766	} 4,242 {	2	6 $\frac{1}{4}$
Viscount Sandon (C.)	—	16,222		2	7 $\frac{1}{4}$
W. Rathbone (L.)	—	15,337	} 4,724 {	3	— $\frac{3}{4}$
W. N. Massey (L.)	—	15,017		3	2
		63,342	8,966	2	9

Boroughs and Candidates.	Registered Electors.	Votes Polled.	Amount Expended.	Average Cost per Vote.	
			£	s.	d.
MANCHESTER	48,256				
H. Birley (C.)	—	15,486	} 3,790 {	2	5 $\frac{1}{4}$
J. Hoare (C.)	—	12,684		2	11 $\frac{3}{4}$
T. Bazley (L.)	—	14,192	} 2,702 {	1	3
Jacob Bright (L.)	—	13,514		1	3 $\frac{3}{4}$
Ernest Jones (L.)	—	10,662	} 7,103 {	1	8 $\frac{1}{4}$
Mitchell Henry (L.), retired ...	—	5,236		27	1 $\frac{1}{2}$
		71,774	13,595	5	2
OLDHAM	13,454				
J. T. Hibbert (L.)	—	6,140	} 508 {	—	9 $\frac{3}{4}$
J. Platt (L.)	—	6,122		—	9 $\frac{3}{4}$
J. M. Cobbett (C.)	—	6,116	} 825 {	1	4 $\frac{1}{2}$
Serjeant Spinks (C.)	—	6,084		1	4 $\frac{1}{2}$
		24,462	1,343	1	1
PRESTON	11,314				
E. Hermon (C.)	—	5,803	} 1,755 {	3	— $\frac{1}{4}$
Sir T. G. Hesketh (C.)	—	5,700		3	— $\frac{3}{4}$
J. F. Leese (L.)	—	4,741	} 2,134 {	4	6
Lord E. Howard (L.)	—	4,663		4	6 $\frac{3}{4}$
		20,907	3,889	3	8
ROCHDALE	9,280				
T. B. Potter (L.)	—	4,455	527 No statement	2	4 $\frac{1}{4}$
Mr. Schofield (C.)	—	3,270		published.	
		7,725	—	—	—
SALFORD	14,827				
Alderman Cawley (C.)	—	6,312	} 2,129 {	3	4 $\frac{1}{4}$
W. Charley (C.)	—	6,181		3	5 $\frac{1}{4}$
J. Cheetham (L.)	—	6,141	} 2,668 {	4	4
H. Rawson (L.)	—	6,018		4	5
		24,652	4,797	3	9
STALYBRIDGE	5,388				
J. Sidebottom (C.)	—	2,405	721 954	5	11 $\frac{3}{4}$
N. Buckley (L.)	—	2,078		8	8
		4,483	1,675	7	4
WARRINGTON	4,471				
P. Rylands (L.)	—	1,984	543 1,153	5	5 $\frac{3}{4}$
G. Greenall (C.)	—	1,957		11	9 $\frac{1}{4}$
		3,941	1,696	8	7
WIGAN	4,385				
H. Woods (L.)	—	2,219	} 1,290 {	5	9 $\frac{3}{4}$
J. Lancaster (L.)	—	2,166		5	11 $\frac{1}{2}$
N. Eckersley (C.)	—	1,920	} 1,629 {	8	5 $\frac{3}{4}$
J. Pearson (C.)	—	1,875		8	8 $\frac{1}{4}$
		8,180	2,919	7	1

Boroughs and Candidates.	Registered Electors.	Votes Polled.	Amount Expended.	Average Cost per Vote.	
			£	s.	d.
LANCASHIRE (N.)	14,292				
Hon. F. A. Stanley (C.)	—	6,832	} 9,437 {	13	9 $\frac{3}{4}$
Colonel J. W. Patten (C.)	—	6,681		14	1 $\frac{1}{2}$
Marquis of Hartington (L.)	—	5,296		31	8
		18,809	17,780	18	9
LANCASHIRE (N.E.)	8,650				
J. M. Holt (C.)	—	3,612	} 5,922 {	16	4 $\frac{3}{4}$
C. Starkie (C.)	—	3,594		16	5 $\frac{3}{4}$
U. Kay-Shuttleworth (L.)	—	3,463	} 5,286 {	15	3
W. Fenton (L.)	—	3,441		15	4 $\frac{1}{4}$
		14,110	11,208	15	10
LANCASHIRE (S.E.)	19,340				
Hon. A. F. Egerton (C.)	—	8,290	} 8,218 {	9	10 $\frac{3}{4}$
J. S. Henry (C.)	—	8,012		10	3
Right Hon. F. Peel (L.)	—	7,024	} 5,421 {	7	8 $\frac{1}{2}$
H. Y. Thompson (L.)	—	6,953		7	9 $\frac{1}{2}$
		30,279	13,639	9	—
LANCASHIRE (S.W.)	19,218				
C. Turner (C.)	—	7,676	} 7,800 {	10	1 $\frac{3}{4}$
R. A. Cross (C.)	—	7,729		10	1
Right Hon. W. E. Gladstone (L.)	—	7,415	} 9,943 {	13	4 $\frac{3}{4}$
H. R. Grenfell (L.)	—	6,939		14	3 $\frac{1}{2}$
		29,759	17,743	11	10

IV.—The Harvest Yield of 1868.

FROM the *Mark Lane Express*:—

“ In rendering an account of the harvest of 1868, we have to do with one of the most remarkable seasons that has occurred in this country for nearly half a century. From the earliest months the rainfall was less than usual, and this was accompanied with a mildness of temperature that was considered too stimulating for the growth of the principal crop, wheat, which is apt to get winter-proud if it received no check from frost in the secondary stages of its vegetation. But notwithstanding there was no frost of any note during the spring, the wheat crop continued, under a remarkably mild temperature, to hasten towards what was feared would prove a premature maturity. So much was this the case, that in some instances the ear began to show by the middle of May—a most unusually early period. About the same time the drought set in with great determination, and again fears were entertained that the crop would become drought-ripe, which would have rendered the quality of the grain thin, and, consequently, less productive of flour. These fears, however, were soon dissipated, so far as wheat was concerned. The hot dry weather, it is true, hastened the maturing of the grain, but without

injuring or lessening its productive power; and by the latter end of July a very large proportion of the crop was harvested, not only in first rate order, but with such a return in quantity and quality as must convince any person that a hot dry summer is the best climatic condition for the production of that grain. With respect to the spring corn and other kinds of agricultural produce, the case is different. The spring cereals having less time for growth, and consequently having less hold upon the soil, are more affected by drought and heat, and require occasional showers to bring them forward with success and safety. It will be seen by the table that follows these remarks, that with the exception of wheat, every crop has suffered to a serious extent, both in the quantity and quality of the produce. The table contains, in a condensed view, the aggregate results of the reports from 536 correspondents from every part of England:—

The Cereal Crops of 1868.

Classification.	Wheat.	Barley.	Oats.	Beans.	Peas.
Failure	—	—	13	23	6
Two-thirds under average	—	4	5	22	2
One-half	—	29	36	43	16
One-third	1	32	66	71	20
One-fourth	—	11	18	36	18
One-fifth	—	4	8	1	1
Under average	12	252	241	142	166
Average	134	135	93	68	150
Over average	288	25	5	4	18
One-fifth over average	7	4	—	—	—
One-fourth	38	3	2	1	6
One-third	18	1	—	—	—
One-half	20	3	2	—	—
Two-thirds	9	—	1	—	—
Double	1	—	—	—	—
Total	528	503	490	411	403

“ In making an analysis of the above table, we find that out of 528 returns of the wheat crop, there are only 13 under an average, against 134 averages, and 381 over an average. In addition to this extraordinary result, the average weight and quality of the grain was from two to three pounds per bushel greater than usual, adding from 4 to 5 per cent. to the product of flour, of which the excess consists, the bran and offal of good wheat being lighter and less in quantity than that of inferior. The returns of barley show very unfavourably, there being 332 under, against 171 average and above it. The bulk of this crop was too thin to be fit for malting, having been deteriorated in quality as well as quantity from a too hasty ripening, especially on the light soils. So many, however, of the returns are placed under the indefinite description of ‘under average,’ that it is impossible to ascertain correctly the actual deficiency. We are led, however, from the tables and observations of the correspondents, to take it at from one-third to two-fifths of an average, whilst a great proportion of the actual produce is not fit for malting, being only available for grinding purposes and seed corn. The oat crop is decidedly a bad one. Out of 490 returns, there are 387 under against 103 average and over. A glance at the returns in the tables will show that this crop has suffered more than the above figures make it appear. Of the number under average 135 range from one-fourth to entire failure, there being thirteen of this class, whilst of the ‘under average’ class, many of them are more deficient than is implied by the term. We should estimate the deficiency at two-fifths; but as many

of the farmers do not grow more than enough of oats for the consumption of their own stables, the loss of this crop will be less felt than that of other grain. With regard to the bean crop, out of 411 returns, only 73 are an average or over it; whilst of the remainder, there are 142 'under average,' and 195 ranging from one-fourth to failure, of which there are twenty-three cases. It is worthy of notice that, whilst the winter beans were all good, the spring sown were all bad, that is in such cases where any distinction was made in the reports. The crop of peas was better than that of beans. Of the 403 returns, there are 174 average and over, against 229 under it. Some of the crops were worm-eaten; but generally speaking, where the quality is mentioned, it is stated to be good. There were, however, six failures, and in some cases the crops were partially blighted. The deficiency will probably amount to one-fourth of the average."

V.—*Poor Men's Wives.*

FROM the *Pall Mall Gazette*:—

"The committee which recently inquired into the expediency of altering the law relating to the property of married women, discovered some facts which strengthened Mr. Lefevre's case on what may be called its lowest social side. The evidence which was given before them, proves that in the humbler ranks of life the lot of a wife is often a hard and a bitter one. The advantages of marriage seem, in many instances, to be all on one side. The husband finds a drudge and the wife a tyrant. The committee who heard the testimony must have been inclined to wonder why a respectable girl marries at all when she has so much reason to dread that a life of poverty and hardship awaits her. But in the matter of marriage no one attaches much importance to the experience or warnings of others. The young girl in all ranks of life has a beautiful tendency to believe that she is destined to escape the errors and misfortunes which have all been known to overtake others; and, indeed, if we could strike a fair average, it would doubtless be found that these expectations are realised in a fair proportion of cases. But those who live much among the poor, seldom give a cheerful account of their domestic lives. Of course there are thousands of families in which privation is frequent, and yet which manage to avoid brawling and disorder; but there can be little doubt that the lower we go in the social scale, the oftener we find the marriage tie regarded as a thing to be lightly knit and as lightly broken. This, at least, is the testimony of men who spend half their lives in the courts, alleys, and rookeries of England. We should be very glad to think they were mistaken, but the police reports supply too strong a corroboration of their statements.

"The rector of Bethnal Green, the Rev. S. Hansard, whose work has been among the poor of the metropolis for twenty years, told Mr. Lefevre's committee that the women as a rule work very hard, and with little reward to sweeten their toil. Mr. Hansard would protect their earnings from their husbands; in whom he evidently has very little faith. They spend the money while their wives try to save it; and the wives would save more if they were not under the constant fear that it might all be taken away from them at any moment and spent in drink. With husbands who could so act, however, even such a law as Mr. Lefevre proposes would not weigh very much. They would manage by some means to induce the wife to give up her savings; and Mr. Hansard tells us, what every one must have observed, that poor women are usually most unwilling to go to a police court to complain of their husbands. Protect their earnings, and he thinks their husbands would respect them more than they now do. Mr. Hansard's observations have convinced him that there is an 'immense deal' of bigamy going on in London which is never

punished. This he ascribes to the indifference of the man to the moral obligation of marriage. The woman, he thinks, is nearly always ignorant of a former marriage. 'There is, undoubtedly,' he went on to say, 'among the very lowest stratum of our population a very great deal of brutality and disregard for the marriage tie.' Sometimes young girls in this class of life save money from their earnings while they are single. When they get married this little store is soon dispersed. It goes in paying the husband's debts, or in buying necessities for the household. After the law, says Mr. Hansard, and the men would respect it: they would not try to force money from their wives by brutality. It is clear from all the other portions of his evidence that this opinion is founded upon hope rather than upon actual experience.

"In some respects Mr. Mansfield, the police magistrate of Marylebone, confirmed the remarks of the rector of Bethnal Green. He had found that the wives of poor men were in general more thrifty than their husbands. Among the 'respectable' working classes, the wife acts as the treasurer of the family, taking her husband's earnings and doing the best she can for the household with them. A shilling or two is given to the husband that he may go and drink on Saturday night. In such cases as these, it may be presumed, the woman requires no protection for her earnings more than she can find now. The secretary of a co-operative society at Rochdale, Mr. Ormerod, cited instances of a different character. There are 7,000 members of his society, and many of them are women. When these women get married, the husband frequently applies to the society for his wife's money, but the managers decline to give it up to him. 'We tell them,' said Mr. Ormerod, 'that as the money is invested in the wife's name, they have no right to draw it.' Of course this answer could not be upheld in a court of law, but it seems to suffice. A judicial decision is never challenged—probably because the exposure attendant on the process would be inconvenient. A far more satisfactory circumstance was mentioned by Mr. Ormerod. It is usual for both husband and wife to become members of this society, and in many instances each respects the other's savings. In one case a definite agreement was entered into between the husband and wife. They had one child, and each contributed a certain sum towards the household expenses. Whatever was earned over this contribution was saved, and the woman in that way accumulated very nearly 200*l.* out of her own earnings. Other women have saved as much as 50*l.* or 60*l.* There are families where the husband has 100*l.* in the society and the wife 100*l.*, and it is not often that either thinks of touching the other's money. But where a husband does wish to handle his wife's money, and she objects, the society takes the part of the wife, and Mr. Ormerod thinks the effect has been most beneficial. It must be understood that the secretary frankly told the committee he knew nothing of law, and had no education, except such as he had picked up at a Sunday school. His evidence was very sensible and straightforward, and, no doubt, it had weight with the committee in inducing them to report back Mr. Lefevre's bill without amendment.

"The rector of Hoxton, the Rev. T. W. Fowle, was likewise earnestly in favour of the measure. He thought the protection of the wife's property would be quite as much an advantage to the husband as to her; for it happens that when the woman's earnings are seized, they are wasted in drink. Wherever the husband is not a sober man, 'the condition of the women of the lower class is dreadful.' Drunkenness, it seems, prevails very much in Hoxton, and the condition of the wife in bad cases is described as being most miserable; yet she will not punish her husband by taking him before a police magistrate. This was also the statement of several other witnesses who came from different parts of the country, and some cases of great hardship were related to the committee. Mr. Mundella, the manufacturer at Nottingham, who employs over 2,000 female hands, testified that it was lamentable to see to what an extent the earnings of women were dissipated by bad husbands. The women were, as a rule, more thrifty than men, and quite as able to take care of their affairs as the husband.

"All this is a fair example of a particular body of facts laid before the com-

mittee, and it may serve to explain the conclusion at which they arrived. In dealing with the question by law, the great difficulty obviously is with the wives. If women habitually maltreated by drunken husbands decline the protection extended to them by the law, they are not likely to insist upon the observance of such measures as Mr. Lefevre proposes on their behalf. The committee, at any rate, were clearly not actuated by any revolutionary ideas. They were much struck by the facts laid before them, and they were probably unwilling to crush Mr. Lefevre's project without further hearing. It remains for Mr. Lefevre to meet the very serious objections to his scheme which have been brought forward on legal grounds, as well as on account of social questions of a higher order than the committee undertook to investigate."

VI.—*The Agricultural Labourer.*

FROM the *Daily News*:—

"Canon Girdlestone is a brave man, if not a wise one. At Norwich, the metropolis of an agricultural district, he ventured to describe the condition of the agricultural labourer as he has found it. The dissatisfaction of the Norfolk farmers present amounted to indignation, although it was the west and not the east of England labourer that he sketched for the benefit of the Economic Science Section of the British Association. The reverend canon described the modern substitute for the practical serf of Saxon and Norman times, ignorant, hopeless, helpless, working long hours in a damp climate, miserably clad, for wages barely sufficient to procure, not the necessaries, but the sustenance of life, returning at night to a damp crowded cottage, with no luxury but an occasional gift of meat and extra dose of sour cider, at fifty years crippled with rheumatism, looking forward as a matter of course to parish relief in every difficulty, and to parish support when past labour. The correspondents of the newspapers that represent the opinions and prejudices of farmers will angrily deny the correctness of this picture; and they will be partially justified. As a picture of the labourer in some of the most backward counties of England, Canon Girdlestone's representation may pass as only too true. But nothing is more unsafe than broad sweeping assertions on a matter which presents the utmost diversity to the observant eye. In many parts of England the farm labourer is as well off as the artisan, if we take into account all that he gets in exchange for his labour. The worst that can be said is that the average labourer cannot live, and save for the years when he is past work, out of his average wages. It would, however, be unjust to lay what is unsatisfactory in the condition of agricultural labour, at the doors of the present generation of agriculturists, whether farmers or landlords. Our agricultural labourers are the sons of those who were born and bred under the old poor law, with its cancerous laws of settlement, and who were paupers from the cradle to the grave. Employer and employed have alike been trained in prejudice against that emigration without which there can be no satisfactory adjustment of the laws of supply and demand. We cannot expect these evils to be remedied suddenly. It is the farmer's interest to have good labourers about him, and such men will always be able to obtain what they are worth. It will be found that where wages are very low the labourer is of a low type. Education is doing much to qualify him for better wages; and as he becomes more valuable farmers will purchase machinery, and the tools requiring intelligent labourers, and consequently be compelled to do more by piecework, to pay higher wages, and to offer inducements to good hands in the shape of gardens and potato plots. The pig will no longer be an objection, and where possible—for pasture is

scarce in some counties—a cow's grass will be provided. This movement has commenced; it is rapidly extending, although it has scarcely touched the west of England, where the smock-frock farmer who reads little and travels less is largely in the majority. But without the intelligence that education gives the labourer will rarely find courage to migrate or emigrate, and, if he does, will scarcely become more independent of charity with doubled wages. Of this we have had flagrant examples in the coal and iron districts of Staffordshire. It is in an education which will prepare the labourer for doing the best kind of work, for seeking good wages wherever they are to be found, and using them to make him independent of charity, that we must look for a permanent improvement in the social condition of the agricultural servants. The great fault of the education given in agricultural villages, even when it is complete in its way, and the children are really taught to read with pleasure to themselves, to write and cipher well enough to be of use in after life, is that it wants connection with their daily life. The people who answer glibly questions about the geography of Africa or Asia cannot find their way on the Ordnance map of their own country. The natural history of the lion, the camel, and the buffalo is more familiar to them than the important varieties of the British ox, sheep, or pig. Nothing is more needed to primary agricultural education than good text books, which the future ploughboys, cattle herds, and shepherds of the parish would read with interest; books written by able men and women perfectly at home in their subjects, such as the Rev. Charles Kingsley and Miss Martineau could write. Farmers and their men would take infinitely more interest in education if it were more real, and less on the plan of steps up a ladder which the pupils will never be called to climb. The Royal Agricultural Society has made some vague efforts to promote education. It could not do better than turn its attention to the production of practical and readable text-books for agricultural schools. The materials are ample in extracts from Arthur Young, William Cobbett, down to Chandos Wren Hoskyns (*Talpa*), and the essay on sheep in their last *Journal*."

VII.—*The Budget of the City of Paris.*

FROM the *Economist*:—

"It is probable that some part of the coming session of Parliament will be occupied with discussions on the taxation and municipal administration of London. It may not be without interest therefore to give a brief account of the finance of our great neighbouring capital, Paris, to which reference will no doubt frequently be made. The budget which Baron Haussmann has just submitted may furnish the occasion. Unfortunately the local budget of Paris is composed of as many parts—ordinary, extraordinary, special, supplementary—as that of France itself, and the accounts of two or three years are likewise handled at one time. In consequence the finance of Paris is almost as unintelligible as that of London. Here we have so few accounts and figures that nobody knows all or can know all; there they have so many, and the weak parts of the finance are so dexterously concealed that there is no little dispute and controversy as to the real facts. For our present purposes, however, we may safely take the most intelligible of the official figures so far as they go, noting only by way of precaution that there is something behind.

"The years about which we get most information are those of 1868 and 1869. In regard to 1868, what we have here is Baron Haussmann's calculation as to how it will turn out, so that by comparing it with the estimate we can see how he stands. The estimate was as follows:—

*Revenue.**Ordinary Receipts—*

	£	£
1. Centimes communal	139,976	
2. Octroi	4,100,600	
3. Markets	386,472	
4. Public weights, &c.	39,400	
5. Street dues	19,200	
6. Hydraulic establishments.....	251,772	
7. Slaughter houses	99,000	
8. Warehouses	28,000	
9. Rent of parts of public way	162,268	
10. Rents of communal properties	44,068	
11. Clearances	6,240	
12. Funeral dues	28,420	
13. Concessions of land in cemeteries	66,040	
14. Exploitation of public ways	24,260	
15. Contributions, legacies, and donations for works, &c.	458,040	
16. Miscellaneous	133,000	
	<hr/>	5,986,000

Extraordinary Receipts—

17. Miscellaneous articles.....	576,000
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Supplementary Receipts—

18. Surplus of 1867	640,000
19. Arrears	140,000
20. Unforeseen receipts	20,000
	<hr/>
	800,000

<i>Special receipts</i>	2,445,000
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General total	<hr/>
	9,807,000

*Expenditure.**Ordinary—*

	£	£
1. Municipal debt	841,772	
2. Due by the city to the State.....	91,840	
3. Prefecture—central “ Mairie ”	95,548	
4. Octroi and other expenses of collection	354,724	
5. District mairies	48,204	
6. Garde national, Paris guard, &c.	119,528	
7. Public worship	6,768	
8. Interments	35,536	
9. Charity establishments	474,872	
10. Lyceums, colleges, and special institutions	24,436	
11. Primary instruction	244,020	
12. Maintenance of edifices, &c.	69,344	
13. Streets of Paris (ordinary service)	31,696	
14. Municipal service of public works	976,104	
15. Pensions	4,228	
16. Fetes and public ceremonies	30,040	
17. Miscellaneous expenses	19,736	
18. Prefecture of police	638,600	
	<hr/>	4,106,000

<i>Extraordinary</i> (including 467,000 <i>l.</i> for reimbursement of the debt, } and 1,600,000 <i>l.</i> for extraordinary works)	2,456,504
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<i>Supplementary expenditure</i>	800,000
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<i>Special expenditure</i>	2,445,000
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9,807,000

“ This was the sketch of the budget, but the issue will be somewhat different. The ordinary receipts have been increased by about 200,000*l.*, but instead of getting 576,000*l.* of extraordinary receipts, there will only be 420,000*l.* The difference in the latter arises from a dispute as to payments by the State to the city on account of certain public works, but Baron Haussmann is confident his claim will yet be made good. The supplementary receipts have been increased from 800,000*l.* to 855,000*l.*, but on the other hand the special funds now figure at 1,562,000*l.* instead of 2,445,000*l.*—almost the only item being the receipts for two terms of the loan of 1865. In other words, Baron Haussmann admits having borrowed a million and a-half within the year. The total amount of the budget receipts as thus shown is 9,017,000*l.*, of which 7,450,000*l.* consists of what is strictly speaking income and arrears of previous years, and 1,560,000*l.* are borrowed.

“ The changes in the expenditure have been the opening of new credits under the ‘ordinary’ head to the extent of 13,500*l.*, and the abandonment of credits opened to the extent of 100,000*l.* The difference is about 87,000*l.*, which, deducted from the original estimate of 4,106,000*l.*, shows an expenditure of 4,020,000*l.* The extraordinary expenses, however, instead of being 2,456,000*l.* as in the above estimate, will be 2,800,000*l.*—an addition of 350,000*l.* Of supplementary expenditure there is no mention, except of a sum of 170,000*l.* for arrears of previous years; and the special expenditure is made to square with the special funds. The meaning, we suppose, is that having borrowed less than he anticipated, Baron Haussmann has been able to spend less on public works. Altogether the expenditure stands at 8,511,000*l.* The budget thus balances:—

<i>Receipts—</i>		£
From revenue	7,453,000	
„ loans	1,563,000	
	<hr/>	
	9,016,000	
<i>Expenditure—</i>		£
Ordinary and extraordinary	6,948,000	
Special	1,563,000	
	<hr/>	
	8,511,000	
	<hr/>	
Surplus.....	505,000	
	<hr/>	

“ It is thus apparent, even from the official figures, that the surplus is only got by borrowing. When all deductions are made, however, there is still a sum of 7,000,000*l.* and upwards derived from revenue of various kinds, and available for expenditure. Of this amount again, more than 4,000,000*l.* is derived from octroi, while markets and other municipal establishments are made to yield about 1,000,000*l.* Perhaps the most curious item of all is the sum of 458,000*l.* for contributions, *legacies*, and *donations* on account of public works. It seems a large receipt from comparatively accidental sources. The total revenue of London—city, Board of Works, and parishes—from taxes, was estimated by Mr. Göschel in his speech last year at 3,500,000*l.*; so that Paris, though one-third smaller a city, is plainly taxed very much more, whether it gets value for the money or not.

“ As to the value it does get, it is observable from the account of expenditure, that unless by borrowing very little can have been spent on new public works. The special expenditure is all borrowed money, and of the remaining 6,948,000*l.*, only about 1,000,000*l.* was available for such works. The money is principally spent in paying the interest on the debt (841,000*l.*) and reimbursement (467,000*l.*); maintaining the police, 630,000*l.*; charity, 474,000*l.*; education (lyceums and

primary), 260,000*l.* And there is a charge of no less than 354,000*l.* for collecting the octroi. The expenditure on the 'mairies' is also a large item. Deducting the quarter of a million for education, there is hardly an item that is not of the nature of the ordinary local expenditure, the same in kind as that of London—the expenditure on charity, for instance, being precisely similar to our own on the poor. If we could only get the items of London expenditure into one account, a comparison would be very useful.

"We need not give any details of the budget of 1869, as they are based on the experience of 1868, as now estimated. The total of the receipts is about the same as 1868, or 8,960,000*l.* The main difference is that as the resource of borrowing has come to an end, the extraordinary receipts, amounting to a million and a-half, are chiefly made up of sums derived from sales of property. With regard to expenditure, the principal difference is the sudden increase of the charge for the debt interest. The following shows the progress made :—

	£
Charge in 1867	765,000
„ '68	841,000
„ '69	1,846,000

—an increase of a million in 1869 over 1868. The truth is, that Paris is now being made to pay the bill for its great improvements, which according to a special report by Baron Haussmann, recently made, are admitted to have cost a net sum of 35,000,000*l.* An annual interest of nearly 2,000,000*l.*, besides whatever sum may be applied by way of reimbursement, is the penalty that Paris will have to bear. Baron Haussmann's consolation is the rapid increase of the city revenue. In 1870 there will be a surplus of revenue over expenditure of 1,200,000*l.*, which can either be applied towards a reduction of the burdens on the municipality, or, as he seems to prefer, to a continuance of the process of rebuilding. But the Parisians, if they had their way, would now prefer less taxation."

VIII.—*The Reserves of the National Banks of the United States.*

THE following important article is taken from the *Economist* of the 2nd January last :—

"An able American correspondent has sent us an analysis of the last published abstract of the quarterly returns which the national banks of the United States are compelled to make to the Government. The returns are dated the morning of the 1st of October last, before the commencement of business, and show the position of the banks at that time, though the abstract was only completed by the Comptroller of the Currency on the 18th of November. A sufficiently long period has not yet elapsed to test fully the system which has absorbed the banking business of the United States; but the returns, as analysed, let us see what is the present position of the banks, and in one respect—the proportion of the cash reserve to liabilities for notes and deposits—exhibit a remarkable contrast with English banking.

"The following is the official abstract, with a column added to show the amounts in sterling money, converting the dollar at 3*s.* :—

Resources.

	Dollars.	Sterling.
		£
Loans and discounts	655,875,277	98,381,291
Overdrafts	1,793,570	269,035
United States' bonds to secure circulation	340,487,050	51,073,057
" " public deposits ..	37,360,150	5,604,022
" " and securities on hand ...	36,817,600	5,522,640
Other stocks, bonds, and mortgages.....	20,693,406	3,104,010
Due from approved redeeming agents	66,965,279	10,044,791
" other national banks	35,313,268	5,296,990
" other banks and bankers	7,848,822	1,177,323
Real estate, furniture, and fixtures	22,747,875	3,412,181
Current expenses	5,278,911	791,837
Premiums	1,819,815	272,972
Checks and other cash items	143,241,394	21,486,209
Bills of national banks	11,842,974	1,776,446
" other banks	222,668	33,400
Fractional currency	2,262,791	339,419
Specie	11,749,442	1,762,416
Legal tender notes	92,453,475	13,868,021
Compound interest notes	4,513,730	677,059
Three per cent. certificates	59,080,000	8,862,000
Aggregate	1,558,367,502	233,755,125

Liabilities.

	Dollars.	Sterling.
		£
Capital stock	420,634,511	63,095,177
Surplus fund	77,995,761	11,699,364
Undivided profits	36,095,883	5,414,383
National bank notes outstanding	295,769,489	44,365,423
State "	2,906,352	435,953
Individual deposits.....	579,686,549	86,952,982
United States "	17,573,250	2,635,987
Deposits of United States' disbursing officers....	4,570,478	685,572
Due to national banks	99,414,397	14,912,160
" other banks and bankers	23,720,829	3,558,124
Aggregate	1,558,367,502	233,755,125

" The point to which our correspondent draws attention, is the way in which the banks comply with the law as to the reserve they are to hold. According to the Act of Congress there are eleven principal cities of the union, now spoken of as redemption cities, where the proportion of the reserve to liabilities for notes and deposits must amount to 25 per cent. In these cities the reserve must be composed exclusively of specie, legal tender notes, and treasury certificates, the latter reckoned at two-fifths of their nominal amount. In the other banks of the union the reserve need only be in the proportion of 15 per cent., and it may be composed,

to the extent of three-fifths, of 'balances with redemption agents,' the redemption agents being the national banks in the eleven redemption cities. As there are thus two sets of banks keeping reserves of varying composition and amount, it seems impossible to tell exactly from a return where the two are mixed up, how far the law is complied with; but an approximation may be possible. The proportion should be a mean between 15 and 25 per cent., and we find that this is the case. Deducting from the aggregate liabilities the first three items—capital stock, surplus fund, and undivided profits—the remainder are the liabilities to which the reserve must be proportioned, and they amount to \$1,023,641,345, or 153.546,202*l*. Against this, then, the reserve is—

	\$	£
Due from approved redeeming agents	66,965,279	10,044,791
Specie	11,749,442	1,762,416
Legal tender notes	92,453,475	13,868,021
Three per cent. certificates (two-fifths)	23,632,000	3,544,800
	194,800,196	29,220,028

—or in the proportion of 19 per cent. to the liabilities.

“ Our correspondent has made two other calculations to show the strength of the banks in proportion to their liabilities. First, he compares these with the actual cash items, that is, with the last eight items in the ‘resources’—checks, bills of national banks, bills of other banks, fractional currency, specie, legal tender notes, compound interest notes, and 3 per cent. certificates—which amount altogether to \$325,366,476, or 48,804,971 $\frac{1}{2}$ l. The proportion is 31 77-100. In the second calculation the Government securities (United States’ bonds to secure circulation, &c.), amounting to \$414,664,800, or 62,199,720 $\frac{1}{2}$ l., are added to the cash assets, so that with—

	\$	£
Government securities	414,664,800	62,199,720
Cash assets	325,366,476	48,804,971
The total reserve is.....	740,031,276	111,004,691

—or in the proportion of 72 27-100 per cent. to the liabilities.

“ We are inclined to think that these calculations place the position of the banks in somewhat too favourable a light. To reckon as cash checks on other banks, and bills on other banks, seems a mistake. These are rather assets in the nature of bills receivable, and at least can hardly be reckoned in the aggregate resources of banks if they consist, as we suppose they do, of checks due by one bank to the other. It is fairer to look merely at the items of notes and deposits on the liability side, omitting what is due to other banks as a mere cross entry : and to compare the liability thus restricted with the strictly cash items among the resources—the specie and legal tender notes. This will show the cash position of the American national banks—what they are liable to pay on demand, and the reserve of cash they hold. We thus get the following comparison :—

Cash.

	£	£
Specie	1,762,416	
Legal tender notes	13,868,021	
	<hr/>	15,630,437

Liabilities.

National bank notes outstanding	44,365,423
State ,, 	435,953
Individual deposits.....	86,952,982
United States ,, 	2,635,987
Deposits of United States disbursing officers	685,572
	<hr/>
	135,075,917

This is very nearly in the proportion of $11\frac{5}{8}$ per cent., considerably below the official proportion, or any of the proportions which our correspondent has supplied.

“A comparison with English experience gives the following result. On the 30th of June last the principal London joint stock banks were liable for the following deposits:—

	£
London and Westminster	19,915,000
London Joint Stock	13,836,000
Union	10,069,000
City	2,514,000
Imperial	1,159,000
Alliance	1,296,000
London and County	13,680,000
Consolidated	2,260,000
	<hr/>
	64,729,000
	<hr/>

Besides a liability of about 12,000,000*l.* on ‘acceptances.’ Against this the cash reserve was—

	£
London and Westminster	2,305,000
London Joint Stock	1,783,000
Union	1,935,000
City	533,000
Imperial	357,000
Alliance	416,000
London and County	1,818,000
Consolidated	518,000
	<hr/>
	9,665,000
	<hr/>

This is nearly in the proportion of 13 per cent. if we exclude the acceptances, and of 12 per cent. if we include them. These figures, however, mix up the cash held by the banks themselves and their deposit with the Bank of England, and the published accounts, except in the case of the Union Bank, give us no means of separating them. In the case of the Union, the proportion is about one-half, and if the others are like it, the real cash reserve in the possession of the banks is only about 4,800,000*l.*, or little more than 6 per cent. of their liabilities. The deposit in the Bank of England, it will be said, should fairly be reckoned in the comparison, but then the coin and notes in the bank, its banking reserve, were only 13,000,000*l.* at the date selected, and its total liabilities were 29,000,000*l.*, consisting, to a large extent, of the deposits of other banks. To know the fair value of the bank’s reserve, we should have an account of the bankers’ balances it holds with the private banks, the country banks, and the Scotch and Irish banks, all having deposits with it like the London joint stock banks. But we cannot reckon both ways. Unless the Bank of England has cash equal to *all* its deposits, we cannot, in a computation of this kind, reckon the deposits of the other banks with it as part of *their* banking reserve. Our system, it is plain, is very much more delicate than the American.”

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED SEPTEMBER, 1868.

BIRTHS AND DEATHS—QUARTER ENDED DECEMBER, 1868.

A.—*Serial Table of MARRIAGES, BIRTHS, and DEATHS, returned in the Years 1862-68, and in the QUARTERS of those Years.*

Calendar YEARS, 1862-68 :—Numbers.

Years	'68.	'67.	'66.	'65.	'64.	'63.	'62.
Marriages No.	—	178,791	187,776	185,474	180,387	173,510	164,030
<i>Births</i> „	786,156	767,897	753,870	748,069	740,275	727,417	712,684
Deaths „	480,677	471,102	500,689	490,909	495,531	473,837	436,566

QUARTERS of each Calendar Year, 1862-68.

(I.) MARRIAGES :—*Numbers.*

<i>Qrs. ended last day of</i>	'68.	'67.	'66.	'65.	'64.	'63.	'62.
March..... No.	36,670	36,380	37,579	36,807	37,988	35,528	33,953
June „	45,226	45,462	48,577	45,827	44,599	44,146	40,853
September „	43,480	44,003	46,257	45,852	44,675	41,932	40,600
December „	—	52,946	55,363	56,988	53,125	51,904	48,624

(II.) BIRTHS :—*Numbers.*

<i>Qrs. ended last day of</i>	'68.	'67.	'66.	'65.	'64.	'63.	'62.
March..... No.	198,594	195,355	196,753	194,130	192,947	186,341	181,990
June „	202,892	199,649	192,437	192,988	188,835	189,340	185,554
September „	192,467	190,255	179,086	181,941	181,015	173,439	172,709
December „	192,203	182,638	185,594	179,010	177,478	178,297	172,431

(III.) DEATHS :—*Numbers.*

<i>Qrs. ended last day of</i>	'68.	'67.	'66.	'65.	'64.	'63.	'62.
March..... No.	120,095	134,254	138,136	140,410	142,977	128,096	122,019
June „	109,984	112,523	128,551	115,892	116,880	118,121	107,392
September „	130,502	108,462	116,650	113,362	112,223	112,504	92,381
December „	120,096	115,863	117,352	121,245	123,451	115,116	114,774

Annual Rates per Cent. of PERSONS MARRIED, and of BIRTHS, and DEATHS, during the Years 1862-68, and the QUARTERS of those Years.

Calendar YEARS, 1862-68 :—General Percentage Results.

YEARS.....	'68.	Mean '58-67.	'67.	'66.	'65.	'64.	'63.	'62.
Estmtd. Popln. of England in thousands in middle of each Year....	21,649	—	21,430	21,210	20,991	20,772	20,554	20,336
Persons Mar- ried Per ct. }	—	1·689	1·668	1·770	1·768	1·736	1·688	1·614
Births ,,	3·631	3·508	3·584	3·554	3·564	3·564	3·539	3·504
Deaths.... ,,	2·220	2·257	2·198	2·361	2·339	2·386	2·305	2·147

QUARTERS of each Calendar Year, 1862-68.

(I.) PERSONS MARRIED :—Percentages.

<i>Qrs. ended last day of</i>	'68.	Mean '58-67.	'67.	'66.	'65.	'64.	'63.	'62.
March Per ct.	1·364	1·398	1·382	1·442	1·428	1·472	1·408	1·360
June..... ,,	1·678	1·717	1·704	1·840	1·754	1·724	1·726	1·614
Septmbr. ,,	1·592	1·635	1·628	1·728	1·732	1·704	1·616	1·582
Decembr. ,,	—	1·995	1·954	2·064	2·146	2·022	1·996	1·890

(II.) BIRTHS :—Percentages.

<i>Qrs. ended last day of</i>	'68.	Mean '58-67.	'67.	'66.	'65.	'64.	'63.	'62.
March Per ct.	3·694	3·674	3·713	3·777	3·765	3·740	3·691	3·644
June..... ,,	3·764	3·637	3·742	3·644	3·692	3·651	3·700	3·665
Septmbr. ,,	3·523	3·371	3·518	3·346	3·434	3·453	3·343	3·365
Decembr. ,,	3·509	3·347	3·368	3·458	3·370	3·376	3·428	3·350

(III.) DEATHS :—Percentages.

<i>Qrs. ended last day of</i>	'68.	Mean '58-67.	'67.	'66.	'65.	'64.	'63.	'62.
March Per ct.	2·234	2·576	2·551	2·652	2·723	2·772	2·538	2·443
June..... ,,	2·040	2·220	2·109	2·434	2·217	2·260	2·308	2·121
Septmbr. ,,	2·389	2·024	2·006	2·179	2·140	2·141	2·169	1·800
Decembr. ,,	2·193	2·211	2·137	2·187	2·283	2·349	2·213	2·230

B.—Comparative Table of CONSOLS, PROVISIONS, PAUPERISM, and TEMPERATURE in each of the Nine QUARTERS ended December, 1868.

1	2	3	4		5	6	7		8	9
Quarters ending	Average Price of Consols (for Money).	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the <i>Mean</i> Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism.		Mean Tem- pera- ture.		
						Quarterly Average of the Number of Paupers relieved on the <i>last day</i> of each week.				
			Beef.	Mutton.		In-door.	Out-door.			
1866 Dec. 31	£ 89 $\frac{4}{8}$	<i>s.</i> <i>d.</i> 56 8	<i>d.</i> <i>d.</i> <i>d.</i> 4 $\frac{3}{4}$ —7 5 $\frac{7}{8}$	<i>d.</i> <i>d.</i> <i>d.</i> 5 $\frac{1}{4}$ —7 $\frac{1}{2}$ 6 $\frac{3}{8}$	<i>s.</i> <i>s.</i> <i>s.</i> 85—130 107	133,979	734,312	46·2		
1867 Mar. 31	90 $\frac{7}{8}$	60 7	4 $\frac{3}{4}$ —7 5 $\frac{7}{8}$	5—7 $\frac{1}{4}$ 6 $\frac{1}{8}$	115—160 137	147,620	832,364	38·9		
June 30	92 $\frac{4}{8}$	63 11	4 $\frac{3}{4}$ —6 $\frac{3}{4}$ 5 $\frac{3}{4}$	5 $\frac{1}{4}$ —7 $\frac{1}{4}$ 6 $\frac{1}{4}$	135—175 155	134,678	779,629	53·5		
Sept. 30	94 $\frac{4}{8}$	65 4	4 $\frac{3}{4}$ —6 $\frac{3}{4}$ 5 $\frac{3}{4}$	5—7 6	100—155 127	129,838	743,977	59·7		
Dec. 31	94 $\frac{3}{8}$	67 11	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	4 $\frac{1}{2}$ —6 $\frac{1}{2}$ 5 $\frac{1}{2}$	110—155 132	146,237	771,230	42·5		
1868 Mar. 31	93	72 2	4 $\frac{1}{4}$ —6 $\frac{1}{2}$ 5 $\frac{3}{8}$	4 $\frac{1}{4}$ —6 $\frac{1}{2}$ 5 $\frac{3}{8}$	125—170 147	159,716	860,165	41·4		
June 30	94 $\frac{3}{8}$	71 10	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	4 $\frac{3}{4}$ —7 5 $\frac{7}{8}$	130—170 150	142,588	800,944	55·8		
Sept. 30	94 $\frac{2}{8}$	59 1	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	4 $\frac{3}{4}$ —6 $\frac{3}{4}$ 5 $\frac{3}{4}$	120—175 147	138,284	778,804	63·9		
Dec. 31	94 $\frac{3}{8}$	51 11	4 $\frac{1}{2}$ —7 5 $\frac{3}{4}$	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	70—140 105	153,958?	813,130?	45·1		

C.—General Average Death-Rate Table:—Annual Rate of Mortality to 1,000 of the Population in the Eleven Divisions of England in the Ten Years 1851-60; in the Autumn Quarter of 1867; in the Year 1868; and in the Winter, Spring, Summer, and Autumn Quarters of 1868.

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years. 1851-60.	1867.	1868.				
		Autumn Quarter.	Year.	Winter Quarter.	Spring Quarter.	Summer Quarter.	Autumn Quarter.
I. London	23·63	23·61	23·57	23·29	21·88	24·58	24·52
II. South-Eastern counties ...	19·55	18·07	18·91	19·14	17·01	21·18	18·31
III. South Midland „ ...	20·44	19·03	19·81	20·01	17·13	23·08	19·00
IV. Eastern counties	20·58	18·38	19·57	19·43	18·05	21·48	19·31
V. South-Western counties ...	20·01	17·65	18·12	20·21	16·94	17·04	18·29
VI. West Midland „ ...	22·35	20·30	21·05	21·31	19·19	23·29	20·39
VII. North Midland „	21·10	19·25	21·26	20·59	19·89	24·09	20·48
VIII. North-Western „ ...	25·51	26·31	26·14	26·31	23·92	28·80	25·54
IX. Yorkshire	23·09	21·89	24·66	22·53	22·51	27·99	25·60
X. Northern counties	21·99	24·67	24·12	24·80	21·95	25·35	24·39
XI. Monmouthshire and Wales	21·28	18·85	19·70	22·12	19·89	18·45	18·35

D.—*Special Average Death-Rate Table*:—ANNUAL RATE of MORTALITY *per Cent. in TOWN and COUNTRY DISTRICTS of ENGLAND in each Quarter of the Years 1868-66.*

	Area in Statute Acres.	Population Enumerated. 1861.	Quarters ending	Annual Rate of Mortality per Cent. in each Quarter of the Years			
				1868.	Mean '58-67.	1867.	1866.
In 142 Districts, and 56 Sub-districts, comprising the <i>Chief Towns</i>	3,287,151	10,930,841	March ..	2·403	2·761	2·732	2·966
			June	2·220	2·353	2·199	2·639
			Sept.	2·649	2·249	2·243	2·513
			Dec.	2·415	2·460	2·380	2·439
			Year	2·422	2·456	2·389	2·639
In the remaining Districts and Sub- districts of Eng- land and Wales, comprising chiefly <i>Small Towns</i> and <i>Country Parishes</i> }	34,037,732	9,135,383	Year	1·940	2·014	1·955	2·008
			March ..	2·012	2·350	2·315	2·250
			June	1·804	2·057	1·991	2·171
			Sept.	2·044	1·746	1·696	1·749
			Dec.	1·898	1·902	1·818	1·860

Note.—The three months, January, February, March, contain 90, in leap year 91 days; the three months, April, May, June, 91 days; each of the last two quarters of the year 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 365·25 days, and 366 and 365·25 days in leap year.

E.—*Special Town Table*:—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE and RAINFALL in last Autumn Quarter, in Fourteen Large Towns.

Cities, &c.	Estimated Population in the Middle of the Year 1868.	Births in 14 Weeks ending 2nd Jan., 1869.	Deaths in 14 Weeks ending 2nd Jan., 1869.	Annual Rate to 1,000 Living during the 14 Weeks ending 2nd January.		Mean Temperature in 14 Weeks ending 2nd Jan., 1869.	Rainfall in Inches in 14 Weeks ending 2nd Jan., 1869.
				Births.	Deaths.		
Total of 14 large towns....	6,441,525	62,058	45,198	35·91	26·15	43·7	12·94
London	3,126,635	30,245	20,572	36·05	24·52	45·5	10·14
Bristol (city)	167,487	1,620	928	36·05	20·65	—	—
Birmingham (borough)...	352,296	3,266	1,991	34·55	21·06	44·8	11·91
Liverpool (borough)	500,676	5,024	3,884	37·40	28·91	44·7	12·50
Manchester (city)	366,835	3,490	3,080	35·46	31·29	44·3	16·70
Salford (borough)	117,162	1,182	1,031	37·60	32·80	44·0	15·51
Sheffield (borough)	232,362	2,415	1,512	38·74	24·25	43·9	15·61
Bradford (borough)	134,000	1,265	1,007	35·18	28·01	—	—
Leeds (borough).....	246,851	2,765	2,114	41·75	31·92	45·0	12·54
Hull (borough)	122,628	1,081	857	32·85	26·05	42·4	12·09
Newcastle - on - Tyne } (borough)	127,701	1,304	926	38·06	27·03	41·5	10·29
Edinburgh (city)	177,039	1,701	1,401	35·81	29·49	42·4	8·40
Glasgow (city)	449,868	4,610	3,965	38·19	32·85	42·4	16·65
Dublin (city and some } suburbs)	319,985	2,090	1,930	24·34	22·48	—	—
Berlin	(1867.) 702,437	7,539	6,320	40·00	33·53	43·7	—
Vienna.....	(1863.) 560,000	—	3,896	—	25·93	45·0	—

F.—*Divisional Table*:—MARRIAGES Registered in Quarters ended 30th September, 1868-66; and BIRTHS and DEATHS in Quarters ended 31st December, 1868-66.

1 DIVISIONS. (England and Wales.)	2 AREA in Statute Acres.	3 POPULATION, 1861. (Persons.)	4 5 6 MARRIAGES in Quarters ended 30th September.		
			1868.	1867.	1866.
ENGLD. & WALES....Totals	37,324,883	No. 20,066,224	No. 43,480	No. 44,003	No. 46,257
I. London	77,997	2,803,989	8,213	8,521	9,038
II. South-Eastern	4,065,935	1,847,661	3,723	3,868	3,904
III. South Midland	3,201,290	1,295,515	2,301	2,110	2,296
IV. Eastern	3,214,099	1,142,562	1,807	1,724	1,745
V. South-Western	4,993,660	1,835,714	3,051	3,150	3,274
VI. West Midland	3,865,332	2,436,568	4,859	4,930	5,288
VII. North Midland	3,540,797	1,288,928	2,449	2,353	2,495
VIII. North-Western	2,000,227	2,935,540	7,579	7,709	8,067
IX. Yorkshire	3,654,636	2,015,541	4,668	4,781	5,020
X. Northern	3,492,322	1,151,372	2,428	2,436	2,534
XI. Monmthsh. & Wales	5,218,588	1,312,834	2,402	2,421	2,596

7 DIVISIONS. (England and Wales.)	8 9 10 BIRTHS in Quarters ended 31st December.			11 12 13 DEATHS in Quarters ended 31st December.		
	1868.	1867.	1866.	1868.	1867.	1866.
ENGLD. & WALES....Totals	No. 192,203	No. 182,638	No. 185,594	No. 120,096	No. 115,863	No. 117,352
I. London	27,740	27,142	27,686	18,943	18,130	18,776
II. South-Eastern	17,739	15,917	16,527	9,388	9,146	8,932
III. South Midland	11,844	11,069	11,242	6,439	6,418	6,394
IV. Eastern	9,580	8,941	9,276	5,667	5,383	5,134
V. South-Western	14,389	13,570	14,146	8,579	8,263	8,642
VI. West Midland	23,217	22,306	23,207	13,834	13,594	13,108
VII. North Midland	11,623	11,153	11,264	6,958	6,502	6,336
VIII. North-Western	30,340	28,686	28,371	21,427	21,710	21,874
IX. Yorkshire	21,093	20,301	20,381	14,239	12,028	12,556
X. Northern	12,936	12,071	12,066	8,067	8,021	8,082
XI. Monmthsh. & Wales	11,702	11,482	11,428	6,555	6,668	7,518

G.—General Meteorological Table, Quarter ended December, 1868.

[Abstracted from the particulars supplied to the Registrar-General by JAMES GLAISHER, Esq., F.R.S., &c.]

1868. Months.		Temperature of									Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
		Air.			Evaporation.		Dew Point.		Air— Daily Range.					
		Mean.	Diff. from Aver- age of 27 Years.	Diff. from Aver- age of 27 Years.	Mean.	Diff. from Aver- age of 27 Years.	Mean.	Diff. from Aver- age of 27 Years.	Mean.	Diff. from Aver- age of 27 Years.	Mean.	Diff. from Aver- age of 27 Years.	Mean.	Diff. from Aver- age of 27 Years.
Oct. ...	47·9	—1·8	—2·6	46·2	—2·3	44·4	—2·0	16·7	+2·1	50·8	In. ·293	In. —·024	Gr. 3·3	Gr. —0·4
Nov. ...	41·5	—0·9	—2·5	39·8	—1·8	37·6	—2·2	10·8	—1·0	43·4	·225	—·026	2·6	—0·2
Dec. ...	46·0	+6·9	+5·6	44·6	+5·7	43·1	+6·6	9·4	—0·2	44·0	·278	+·055	3·2	+0·6
Mean ...	45·1	+1·4	+0·2	43·5	+1·5	41·7	+0·6	12·3	+0·3	46·1	·265	+·002	3·0	0·0

1868. Months.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Hori- zontal Move- ment of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from Aver- age of 27 Years.	Mean.	Diff. from Aver- age of 27 Years.	Mean.	Diff. from Aver- age of 27 Years.	Amtt.	Diff. from Aver- age of 53 Years.		Number of Nights it was			Low- est Read- ing at Night.	High- est Read- ing at Night.
											At or below 30°.	Be- tween 30° and 40°.	Above 40°.		
Oct. ...	88	+ 1	In. 29·792	+·095	Gr. 543	+ 4	In. 2·6	—0·2	Miles. 263	6	21	4	○ 20·5	○ 46·5	
Nov. ...	87	— 1	29·836	+·073	552	— 4	1·2	—1·2	284	13	16	1	18·0	47·5	
Dec. ...	90	+ 2	29·379	—·452	538	—14	5·4	+3·5	412	4	14	13	25·0	47·0	
Mean ...	88	+ 1	29·669	—·095	544	— 5	Sum 9·2	Sum +2·1	Mean 321	Sum 23	Sum 51	Sum 18	Lowest 18·0	Highest 47·5	

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

Thunderstorms occurred on the 7th October at Hull; on the 16th at Stonyhurst and North Shields; on the 17th at Eastbourne and Stonyhurst; on the 19th at Truro; and on the 23rd at Eccles and Liverpool. On the 5th November at Llandudno. On the 14th December at Bath; on the 15th at Eastbourne; on the 16th at Guernsey and Osborne; on the 22nd at Truro and Bournemouth; on the 23rd at Guernsey, Truro, and Wilton; on the 24th at Guernsey, Helston, Osborne, Worthing, Tunbridge Wells, and Bath; on the 25th at Helston; on the 26th at Llandudno and Liverpool; on the 27th at Guernsey, Sidmouth, Taunton, Bath, and Stonyhurst; on the 28th at Truro, Osborne, Worthing, Aldershot Camp, London, Halifax, and Stonyhurst.

Thunder was heard but lightning was not seen on the 17th October at Stonyhurst; on the 16th at Stonyhurst and Allenheads; and on the 23rd at Hawarden. On the 14th December at Hawarden; on the 16th at Streatly Vicarage; on the 24th at Royston; and on the 29th at Strathfield Turgiss and Allenheads.

Lightning was seen but thunder was not heard on the 7th October at Oxford; on the 16th at Helston and Allenheads; on the 17th at Allenheads; on the 21st at Wisbech; on the 23rd at Stonyhurst and Allenheads; and on the 26th and 27th at Culloden.

H.—*Special Meteorological Table, Quarter ended 31st December, 1868.*

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermo- meter.	Lowest Reading of the Thermo- meter.	Range of Tem- perature in the Quarter.	Mean Monthly Range of Tem- perature.	Mean Daily Range of Tem- perature.	Mean Tem- perature of the Air.	Mean Degree of Hu- midity.
	in.	°	°	°	°	°	°	
Guernsey	—	66·5	32·0	34·5	23·5	7·3	49·5	—
Barnstaple	29·566	66·0	32·0	34·0	26·7	10·6	48·2	78
Osborne	29·578	67·0	25·1	41·9	36·7	16·6	47·3	87
Royal Observatory	29·578	66·6	26·1	40·5	31·5	12·3	45·1	88
Royston	29·596	67·1	24·3	42·8	33·4	12·5	44·9	85
Lampeter	29·595	64·6	23·0	41·6	36·3	14·8	44·4	86
Norwich	29·585	64·0	29·0	35·0	28·5	10·6	44·8	87
Derby	29·528	61·0	26·0	35·0	30·7	10·5	44·3	82
Manchester	29·527	64·0	26·5	37·5	30·2	11·9	43·8	88
Stonyhurst	29·498	61·1	21·8	39·3	32·6	9·8	43·3	86
York	29·481	65·0	24·0	41·0	32·7	10·1	42·9	90
North Shields ...	29·546	64·0	26·6	37·4	31·3	11·6	43·2	84

10	11	12	13	14	15	16	17	18
NAMES OF STATIONS.	WIND.					Mean Amount of Cloud.	RAIN.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount collected.
		N.	E.	S.	W.			
								in.
Guernsey	1·7	7	6	8	10	6·3	68	15·5
Barnstaple	1·2	5	5	11	10	3·5	69	14·7
Osborne	2·8	7	5	9	10	6·5	50	12·3
Royal Observatory	0·8	6	5	10	10	7·0	48	9·3
Royston	—	6	4	10	11	6·4	56	6·9
Lampeter	0·6	4	6	11	10	7·6	66	19·7
Norwich	—	6	4	14	7	—	35	8·2
Derby	—	6	7	8	10	—	60	11·0
Manchester	—	3	9	13	6	6·9	68	15·7
Stonyhurst	—	5	6	8	12	7·4	80	20·3
York	—	3	8	12	8	—	61	10·9
North Shields ...	1·8	8	5	7	11	6·1	63	7·9

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER
ENDED 31ST DECEMBER, 1868.

I.—Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population, Estimated to the Middle of each Year, during each Quarter of the Years 1868 to 1864 inclusive.

	1868.		1867.		1866.		1865.		1864.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	28,736	3·60	27,969	3·52	28,876	3·66	28,608	3·65	28,177	3·61
Deaths	18,036	2·26	19,981	2·51	19,075	2·42	20,786	2·65	22,576	2·89
Marriages ..	5,287	0·66	5,332	0·66	5,627	0·71	5,407	0·69	5,333	0·68
Mean Tem- perature }	40°·6		36°·5		38°·0		35°·3		35°·7	
2nd Quarter—										
Births	31,025	3·89	30,393	3·83	29,801	3·78	30,332	3·86	29,992	3·84
Deaths	16,928	2·12	17,464	2·20	18,556	2·35	17,066	2·17	18,445	2·36
Marriages ..	5,660	0·71	5,602	0·70	6,019	0·76	5,698	0·72	5,710	0·73
Mean Tem- perature }	51°·0		49°·0		49°·3		51°·5		49°·9	
3rd Quarter—										
Births	28,393	3·56	27,888	3·51	27,197	3·45	27,320	3·48	27,063	3·47
Deaths	16,662	2·09	15,106	1·90	15,451	1·95	15,907	2·02	16,131	2·06
Marriages ..	4,804	0·59	5,047	0·63	5,089	0·64	5,335	0·68	4,993	0·64
Mean Tem- perature }	57°·4		55°·2		54°·4		57°·5		54°·5	
4th Quarter—										
Births	27,519	3·45	27,865	3·51	27,765	3·52	26,866	3·42	27,213	3·49
Deaths	17,760	2·22	16,473	2·07	18,191	2·30	17,072	2·17	17,151	2·19
Marriages ..	6,202	0·77	6,540	0·82	6,894	0·87	7,137	0·91	6,639	0·85
Mean Tem- perature }	41°·5		42°·3		43°·5		43°·4		42°·0	
Year—										
Population.	3,188,125		3,170,769		3,153,413		3,136,057		3,118,701	
Births	115,673	3·63	114,115	3·59	113,639	3·60	113,126	3·60	112,445	3·60
Deaths	69,386	2·17	68,024	2·14	71,273	2·26	70,821	2·25	74,303	2·38
Marriages ..	21,853	0·68	22,521	0·70	23,629	0·75	23,577	0·75	22,675	0·72

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending 31st December, 1868, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

	Population.		Total Births.			Illegitimate Births.		
	Census, 1861.	Estimated, 1868.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,188,125	27,519	3·45	28	2,752	10·0	10·0
128 town districts	1,615,475	1,735,527	16,391	3·77	26	1,574	9·6	10·4
890 rural ,,	1,446,819	1,452,598	11,128	3·06	30	1,178	10·5	9·4

	Population.		Deaths.			Marriages.		
	Census, 1861.	Estimated, 1868.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,188,125	17,760	2·22	45	6,202	0·77	128
128 town districts	1,615,475	1,735,527	11,965	2·75	36	3,750	0·86	115
890 rural ,,	1,446,819	1,452,598	5,795	1·59	62	2,452	0·67	148

Note.—The constitution of several of the districts was altered on January 1, 1868; consequently the numbers of the population in the town and rural districts differ somewhat from those of previous years.

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 31st December, 1868.*

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	10·0						
Northern	6·8	Shetland	4·5	Forfar	12·4	Lanark	8·7
North-Western	5·4	Orkney	5·8	Perth	10·4	Linlithgow.	9·1
North-Eastern	15·2	Caithness ...	9·4	Fife	8·5	Edinburgh.	8·5
East Midland ..	10·7	Sutherland...	6·2	Kinross	10·2	Haddington	9·3
West Midland.	7·9	Ross and }	3·1	Clackman- }	6·9	Berwick	13·3
South-Western	8·6	Cromarty }		nan		Peebles.....	5·1
South-Eastern.	9·0	Inverness ...	7·6	Stirling	10·0	Selkirk	10·4
Southern	17·5	Nairn	11·7	Dumbarton ..	6·6	Roxburgh ..	14·1
		Elgin	14·1	Argyll	5·8	Dumfries ...	17·3
		Banff	16·4	Bute	7·8	Kirkeud- }	21·0
		Aberdeen ...	14·7	Renfrew.....	6·6	bright .. }	
		Kincardine...	18·8	Ayr.....	9·6	Wigtown ...	19·1

IV.—*Divisional Table*:—MARRIAGES, BIRTHS, and DEATHS Registered in the Quarter ended 31st December, 1868.

1	2	3	4	5	6
DIVISIONS. (Scotland)	AREA in Statute Acres.	POPULATION, 1861. (Persons.)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
SCOTLAND Totals	19,639,377	3,062,294	6,202	27,519	17,760
I. Northern	2,261,622	130,422	202	851	421
II. North-Western.....	4,739,876	167,329	191	1,196	617
III. North-Eastern	2,429,594	366,783	840	3,149	1,686
IV. East Midland	2,790,492	523,822	1,047	4,386	2,717
V. West Midland	2,693,176	242,507	377	1,865	1,307
VI. South-Western.....	1,462,397	1,008,253	2,227	10,498	7,547
VII. South-Eastern	1,192,524	408,962	926	3,978	2,435
VIII. Southern	2,069,696	214,216	392	1,596	1,030

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY of MARRIAGES, in the Quarter ended 30th September, 1868; and BIRTHS and DEATHS, in the Quarter ended 31st December, 1868.

COUNTRIES.	[000's omitted].		Marriages.	Per 1,000 of Popu- lation.	Births.	Per 1,000 of Popu- lation.	Deaths.	Per 1,000 of Popu- lation.
	Area in Statute Acres.	Popu- lation, 1861. (Persons.)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,325	20,066	42,480	2·2	192,203	9·6	120,096	6·0
Scotland	19,639	3,062	4,704	1·5	27,519	8·9	17,760	5·8
Ireland	20,322	5,799	5,065	·9	33,062	5·7	20,528	3·5
GREAT BRITAIN AND IRELAND }	77,287	28,927	53,249	1·8	252,784	8·7	158,384	5·5

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios are much under those of England and Scotland.—
ED. S. J.

I.—Number of Occupiers of Land and of Owners of Live Stock; the Average Size of each Holding in 1868.

1	2	3	4	1	2	3	4
ENGLAND.	Occupiers of Land, Owning Live Stock, and Occupiers only.	Owners of Live Stock only.	Average Acreage of each Occupier.	ENGLAND.	Occupiers of Land, Owning Live Stock, and Occupiers only.	Owners of Live Stock only.	Average Acreage of each Occupier.
Counties, Proper.				Counties, Proper.			
<i>South-Eastern—</i>				<i>North Midland—</i>			
Surrey	4,817	364	57·8	Leicester	7,872	94	57·2
Kent	11,237	215	64·0	Rutland.....	1,267	50	60·1
Sussex	8,314	106	75·8	Lincoln	22,092	203	63·0
Southampton	7,808	192	87·5	Nottingham	8,089	177	53·2
Berks	4,128	84	86·6	Derby	12,128	98	39·9
Total	36,304	961	73·5	Total	51,448	622	55·1
<i>South Midland—</i>				<i>North-Western—</i>			
Middlesex	2,572	625	42·4	Chester	13,073	86	37·9
Hertford	3,892	39	84·4	Lancaster	21,727	408	32·8
Buckingham	4,952	54	78·6	Total	34,800	494	34·7
Oxford.....	4,322	21	93·1	<i>York—</i>			
Northampton	6,583	38	81·7	East Riding	8,330	150	77·6
Huntingdon	2,709	18	75·8	North „	15,332	254	51·3
Bedford	3,493	11	70·7	West „	30,174	314	37·4
Cambridge	7,144	40	65·4	Total	53,836	718	47·6
Total	35,667	846	75·3	<i>Northern—</i>			
<i>Eastern—</i>				Durham	6,118	121	64·9
Essex	10,159	123	77·4	Northumberland	5,438	353	121·7
Suffolk	10,725	77	69·2	Cumberland	7,520	98	68·7
Norfolk	16,279	167	63·4	Westmorland	3,469	17	63·4
Total	37,163	367	68·9	Total	22,545	589	79·6
<i>South-Western—</i>				Total of England..	381,381	6,532	59·8
Wilts	6,590	41	107·8	<i>Wales—</i>			
Dorset	4,563	55	95·4	Monmouth	4,196	48	51·3
Devon	16,683	129	60·2	North Wales.....	26,269	212	39·2
Cornwall	13,341	73	36·1	South „	29,014	235	50·7
Somerset	14,561	96	53·4	Total of Wales....	59,479	495	45·7
Total	55,738	394	61·2	Total of Scot- }	80,111	2,392	55·1
<i>West Midland—</i>				land			
Gloucester	9,355	122	65·6	Total of Great }	520,971*	9,419*	57·7
Hereford	6,305	50	64·5				
Salop	11,328	59	58·3				
Stafford	12,867	269	44·4				
Worcester	6,971	140	54·5				
Warwick	7,054	901	66·1				
Total	53,880	1,541	57·5				

* These totals differ very slightly from the corresponding totals in the blue book, but all the county statistics agree with the figures published by the Board of Trade.

II.—Population, Area, Abstract of Acreage under Crops, &c.,

	Years.	England.	Wales.	Scotland.	Total for Great Britain.
Total population	1868	20,451,	1,198,	3,188,	24,838,
Total area (in statute acres)	—	32,590,	4,734,	19,639,	56,964,
<i>Abstract of Acreage—</i>					
Under all kinds of crops, bare fallow, and grass	1867	22,932,	2,415,	4,380,	29,727,
	'68	23,039,	2,504,	4,413,	29,956,
Under corn crops	'67	7,399,	521,	1,364,	9,285,
	'68	7,499,	548,	1,386,	9,434,
„ green „	'67	2,692,	138,	668,	3,498,
	'68	2,585,	128,	673,	3,386,
„ bare fallow	'67	753,	86,	83,	923,
	'68	800,	84,	75,	958,
„ grass—					
Clover, &c. under rotation	'67	2,478,	301,	1,211,	3,990,
	'68	2,371,	328,	1,261,	3,960,
Permanent pasture	'67	9,546,	1,368,	1,053,	11,967,
not broken up in rotation (exclusive of heath or mountain land)	'68	9,704,	1,415,	1,017,	12,136,
<i>Percentage of Acreage—*</i>					
Under corn crops	1867	32·3	21·6	31·1	31·2
	'68	32·5	21·9	31·4	31·5
„ green „	'67	11·7	5·7	15·3	11·8
	'68	11·2	5·1	15·2	11·3
„ bare fallow	'67	3·3	3·6	1·9	3·1
	'68	3·5	3·4	1·7	3·2
„ grass—					
Clover, &c. under rotation	'67	10·8	12·5	27·7	13·4
	'68	10·3	13·1	28·6	13·2
Permanent pasture	'67	41·6	56·6	24·0	40·3
not broken up in rotation (exclusive of heath or mountain land)	'68	42·1	56·5	23·0	40·5
Total	—	100·0	100·0	100·0	100·0
<i>Abstract of Live Stock Returned—</i>					
Total number of cattle	1867	3,469,	545,	979,	4,993,
	'68	3,780,	593,	1,051,	5,424,
„ sheep	'67	19,798,	2,227,	6,894,	28,919,
	'68	20,931,	2,669,	7,112,	30,711,
„ pigs	'67	2,549,	230,	188,	2,967,
	'68	1,982,	187,	140,	2,309,
<i>Proportionate Number of Live Stock to every 100 Acres under Crops, Fallow, and Grass—</i>					
Cattle	1867	15·1	22·5	22·4	16·8
	'68	16·4	23·7	23·8	18·1
Sheep	'67	86·3	92·2	157·4	97·3
	'68	90·8	106·6	161·2	102·5
Pigs	'67	11·1	9·5	4·3	10·0
	'68	8·6	7·5	3·2	7·7
<i>Number of Returns Obtained—</i>					
From occupiers of land owning live stock, and occupiers of land only	1867	378,	54,	79,	511,
	'68	386,	55,	80,	521,
From owners of live stock only	'67	7,	1,	3,	9,
	'68	7,	1,	2,	9,

* Stated exclusively of the small percentages for flax and hops.

† Including under flax, 253,105 acres in 1867, and 206,446 acres in 1868.

and Number of Live Stock. [000's omitted from the quantities.]

Ireland.†	Isle of Man.	Channel Islands.		Total for United Kingdom.	Years.	
		Jersey.	Guernsey, &c.			
5,532,	148,			30,518,	1868	Total population
20,323,	180,	29,	18,	77,514,	—	Total area (in statute acres)
15,542,†	84,	20,	13,	45,387,	1867	Abstract of Acreage— Under all kinds of crops, bare fallow, and grass
15,575,†	89,	19,	14,	45,653,	'68	
2,115,	27,	3,	2,	11,432,	'67	Under corn crops
2,193,	28,	3,	2,	11,660,	'68	
1,432,	13,	6,	3,	4,952,	'67	" green "
1,456,	13,	6,	4,	4,865,	'68	
26,	2,	3,	1,	954,	'67	" bare fallow
24,	1,	1,	1,	984,	'68	
1,658,	27,	3,	1,	5,679,	'67	" grass— Clover, &c. under rotation
1,692,	33,	5,	1,	5,690,	'68	
10,057,	16,	6,	6,	22,053,	'67	Permanent Pasture not broken up in rotation (exclusive of heath or mountain land)
10,004,	14,	4,	7,	22,165,	'68	
13·6	32·0	13·9	16·7	25·2	1867	Percentage of Acreage—* Under corn crops
14·0	31·5	18·4	15·4	25·5	'68	
9·2	15·0	27·7	23·7	10·9	'67	" green "
9·4	15·0	30·8	26·6	10·6	'68	
·2	2·4	12·5	5·5	2·1	'67	" bare fallow
·2	·5	4·0	5·8	2·2	'68	
10·7	31·8	16·0	6·7	12·5	'67	" grass— Clover, &c. under rotation
10·9	36·7	27·8	5·5	12·5	'68	
64·7	18·8	30·0	47·4	48·6	'67	Permanent pasture not broken up in rotation (exclusive of heath or mountain land)
64·2	16·2	19·0	46·7	48·6	'68	
100·0	100·0	100·0	100·0	100·0	—	Total
3,702,	19,	10,	7,	8,731,	1867	Abstract of Live Stock Returned— Total number of cattle
3,620,	20,	12,	7,	9,083,	'68	
4,826,	71,	1,	1,	33,818,	'67	" sheep
4,822,	72,	1,	1,	35,608,	'68	
1,234,	8,	6,	7,	4,221,	'67	" pigs
862,	5,	7,	6,	3,189,	'68	
23·8	22·1	49·5	56·4	19·2	1867	Proportionate Number of Live Stock to every 100 Acres under Crops, Fallow, and Grass— Cattle
23·2	22·3	65·3	49·9	19·9	'68	
31·1	84·0	2·6	10·4	74·5	'67	Sheep
31·0	81·4	2·7	9·5	78·0	'68	
7·9	9·1	28·5	51·8	9·3	'67	Pigs
5·5	6·0	38·1	40·4	7·0	'68	
About 600,	2,	—	—	—	1867	Number of Returns Obtained— From occupiers of land owning live stock, and occupiers of land only
	2,	—	—	—	'68	
	—	—	—	—	'67	From owners of live stock only
	—	—	—	—	'68	

† The detailed returns for Ireland will be found in the annual reports prepared by the Registrar-General and laid before Parliament.

III.—Acreage of Crops

[000's omitted, consequently 2,875, = 2,875,000.]

1	2	3	4 5 6 7 8				9	10	11	
ENGLAND. Counties, Proper.	Popula- tion (1868), Middle of Year.	Total Area in Statute Acres.	Number of Acres under Crops and Grass.					Per- centage of Corn Crops to Total under all kinds of Crops, Bare Fallow, and Grass.	CATTLE. — Number to every 100 Acres under Crops, Bare Fallow, and Grass.	SHEEP. — Number to every 100 Acres under Crops, Bare Fallow, and Grass.
			Total under all kinds of Crops, Bare Fallow, and Grass.	Whereof under						
				Corn Crops.	Green Crops.	Clover and Artifi- cial and other Grasses under Rota- tion.	Perma- nent Pasture, Meadow, and Grass not broken up in Rotation (exclusive of Hill Pastures).			
<i>South-Eastern—</i>										
Surrey	949,	479,	278,	100,	39,	25,	98,	35·8	14·3	46·0
Kent	825,	1,040,	719,	246,	74,	47,	295,	34·2	9·4	156·1
Sussex	381,	937,	630,	218,	69,	55,	248,	34·6	14·9	95·5
Southampton ..	541,	1,070,	683,	269,	132,	105,	150,	39·3	7·8	96·3
Berks	179,	451,	358,	147,	55,	37,	108,	41·1	9·2	99·2
Total	2,875,	3,977,	2,668,	980,	369,	269,	899,	36·7	10·8	107·4
<i>South Midland—</i>										
Middlesex	2,448,	180,	109,	20,	9,	3,	75,	18·0	20·4	43·3
Hertford	176,	391,	329,	148,	41,	34,	88,	45·1	8·4	67·9
Buckingham	170,	467,	388,	136,	33,	24,	182,	35·0	15·4	91·9
Oxford	170,	473,	403,	163,	54,	42,	135,	40·4	11·7	99·9
Northampton ..	237,	630,	538,	183,	36,	28,	266,	34·1	18·7	111·2
Huntingdon	64,	230,	205,	102,	17,	12,	56,	49·7	11·6	81·4
Bedford	142,	296,	247,	116,	28,	17,	73,	47·0	11·0	80·4
Cambridge	171,	525,	468,	259,	69,	41,	73,	55·4	8·3	74·4
Total	3,578,	3,192,	2,687,	1,127,	287,	201,	948,	42·0	12·9	87·1
<i>Eastern—</i>										
Essex	429,	1,061,	787,	406,	94,	72,	164,	51·7	8·6	63·3
Suffolk	334,	948,	743,	376,	114,	80,	142,	50·6	7·9	78·5
Norfolk	427,	1,354,	1,032,	457,	194,	155,	212,	44·3	10·1	84·0
Total	1,190,	3,363,	2,562,	1,239,	402,	307,	518,	48·3	9·0	76·0
<i>South-Western—</i>										
Wilts	245,	865,	711,	219,	104,	69,	296,	30·8	11·4	110·6
Dorset	190,	632,	436,	112,	58,	44,	212,	25·7	15·4	124·8
Devon	592,	1,657,	1,004,	291,	141,	138,	357,	28·9	20·2	95·3
Cornwall	376,	874,	481,	145,	55,	116,	120,	30·1	30·1	91·1
Somerset	441,	1,047,	778,	153,	64,	54,	493,	19·6	23·7	101·1
Total	1,844,	5,075,	3,410,	920,	422,	421,	1,478,	27·0	19·9	103·0
<i>West Midland—</i>										
Gloucester	501,	805,	615,	176,	63,	77,	288,	28·5	17·3	82·2
Hereford	129,	535,	406,	109,	36,	34,	214,	26·9	17·5	93·6
Salop	247,	826,	660,	177,	64,	66,	341,	26·8	18·3	78·7
Stafford	858,	728,	571,	129,	45,	46,	340,	22·6	21·9	64·1
Worcester	328,	472,	380,	125,	31,	29,	179,	33·0	13·5	72·7
Warwick	628,	564,	466,	153,	28,	34,	234,	32·7	17·9	93·3
Total	2,691,	3,930,	3,098,	869,	267,	286,	1,596,	28·1	18·0	80·2

and Grass in 1868.

[000's omitted, consequently 2,875, = 2,875,000.]

12 Figs.	13	14	15	16	17	18	19	20	21	22	23
— Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Number of Acres Under										ENGLAND. — Counties, Proper.
	Wheat.	Barley or Bere.	Oats.	Beans.	Peas.	Pota- toes.	Turnips and Swedes.	Man- gold.	Vetches, Lucerne, and any other Crops except Clover and Grass.	Bare Fallow, and Uncropped Arable Land.	
12·8	45,	17,	26,	3,	7,	3,	20,	6,	7,	15,	<i>South-Eastern—</i> Surrey Kent Sussex Southampton Berks
8·3	111,	38,	53,	23,	21,	13,	32,	8,	18,	15,	
7·0	105,	24,	66,	9,	14,	3,	35,	8,	15,	30,	
10·4	118,	66,	67,	6,	9,	5,	93,	7,	22,	25,	
11·4	64,	37,	25,	14,	6,	1,	38,	4,	10,	10,	
9·4	443,	182,	237,	55,	57,	25,	218,	33,	72,	95,	Total
12·3	9,	2,	6,	1,	1,	3,	2,	2,	3,	1,	<i>South Midland—</i> Middlesex Hertford Buckingham Oxford Northampton Huntingdon Bedford Cambridge
10·7	63,	43,	26,	9,	7,	1,	27,	4,	8,	18,	
10·7	60,	28,	24,	17,	7,	1,	21,	3,	7,	13,	
11·2	64,	49,	24,	17,	9,	1,	41,	3,	7,	9,	
7·0	82,	50,	18,	25,	9,	2,	25,	3,	5,	24,	
11·3	50,	20,	11,	15,	6,	3,	4,	3,	4,	18,	
12·3	54,	28,	10,	18,	5,	4,	13,	3,	6,	13,	
11·0	132,	53,	38,	27,	7,	9,	22,	14,	13,	25,	
10·4	514,	273,	157,	129,	51,	24,	155,	35,	53,	121,	Total
12·7	193,	98,	44,	45,	25,	10,	28,	28,	25,	49,	<i>Eastern—</i> Essex Suffolk Norfolk
15·7	160,	130,	18,	38,	25,	2,	63,	31,	15,	30,	
9·6	206,	183,	33,	15,	14,	6,	149,	30,	6,	13,	
12·4	559,	411,	95,	98,	64,	18,	240,	89,	46,	92,	Total
8·8	104,	63,	31,	12,	7,	4,	68,	4,	21,	23,	<i>South-Western—</i> Wilts Dorset Devon Cornwall Somerset
8·4	48,	37,	20,	3,	3,	3,	42,	4,	7,	9,	
8·6	125,	78,	84,	1,	1,	18,	86,	19,	7,	77,	
11·0	53,	49,	43,	—	—	7,	31,	8,	1,	46,	
10·4	81,	33,	22,	15,	3,	10,	36,	9,	6,	14,	
9·4	411,	260,	200,	31,	14,	42,	263,	44,	42,	169,	Total
9·9	97,	38,	15,	17,	8,	6,	43,	3,	10,	12,	<i>West Midland—</i> Gloucester Hereford Salop Stafford Worcester Warwick
7·1	63,	21,	11,	8,	6,	3,	27,	1,	4,	8,	
9·3	90,	50,	25,	5,	6,	6,	53,	2,	2,	13,	
9·4	60,	30,	31,	4,	4,	10,	28,	3,	3,	11,	
11·4	72,	18,	6,	20,	8,	6,	15,	3,	6,	13,	
10·0	81,	26,	14,	23,	9,	2,	17,	3,	4,	18,	
9·5	463,	183,	102,	77,	41,	33,	183,	15,	29,	75,	Total

III.—Acreage of Crops

[000's omitted, consequently 2,875, = 2,875,000.]

1	2	3	4 5 6 7 8 Number of Acres under Crops and Grass.					9	10	11
ENGLAND. — Counties, Proper.	Popula- tion (1868), Middle of Year.	Total Area in Statute Acres.	Total under all kinds of Crops, Bare Fallow, and Grass.	Whereof under				Per- centage of Corn Crops to Total under all kinds of Crops, Bare Fallow, and Grass.	CATTLE. — Number to every 100 Acres under Crops, Bare Fallow, and Grass.	SHEEP. — Numb- to every 100 Acres under Crops, Bare Fallow, and Grass.
				Corn Crops.	Green Crops.	Clover and Artifi- cial and other Grasses under Rota- tion.	Perma- nent Pasture, and Grass not broken up in Rotation (exclusive of Hill Pastures).			
<i>North Midland—</i>										
Leicester	240,	514,	450,	116,	23,	24,	275,	25·7	26·2	106·1
Rutland.....	21,	96,	76,	26,	7,	6,	35,	33·7	19·2	147·9
Lincoln	412,	1,776,	1,393,	594,	211,	148,	403,	42·7	13·1	118·1
Nottingham ...	309,	526,	431,	162,	49,	52,	149,	37·6	17·0	81·3
Derby	371,	659,	484,	81,	22,	34,	335,	16·9	26·0	57·8
Total	1,353,	3,571,	2,834,	979,	312,	264,	1,197,	34·5	18·1	101·1
<i>North-Western—</i>										
Chester	540,	707,	496,	94,	36,	45,	315,	19·0	27·1	40·0
Lancaster	2,739,	1,219,	712,	102,	55,	60,	486,	14·4	29·6	45·8
Total	3,279,	1,926,	1,208,	196,	91,	105,	801,	16·2	28·5	43·4
<i>York—</i>										
East Riding	296,	771,	646,	275,	100,	87,	155,	42·5	11·9	91·7
North „	267,	1,350,	787,	225,	74,	67,	383,	28·6	18·8	94·7
West „	1,639,	1,709,	1,128,	254,	96,	91,	659,	22·5	20·6	73·0
Total	2,202,	3,830,	2,561,	754,	270,	245,	1,197,	29·6	17·8	84·3
<i>Northern—</i>										
Durham	609,	623,	397,	107,	32,	40,	192,	26·9	15·1	55·6
Northumber- land	371,	1,249,	662,	151,	59,	85,	345,	22·8	13·4	142·6
Cumberland	211,	1,001,	517,	110,	49,	108,	239,	21·4	22·8	99·6
Westmorland	62,	485,	220,	23,	11,	21,	163,	10·3	24·7	156·4
Total	1,253,	3,358,	1,796,	391,	151,	254,	939,	21·8	17·9	112·6
Total of Eng- land	20,265,	32,222,	22,824,	7,455,	2,571,	2,352,	9,573,	32·7	16·4	90·8
<i>Wales—</i>										
Monmouth	186,	368,	215,	44,	14,	19,	131,	20·3	17·9	95·4
North Wales....	435,	2,003,	1,030,	241,	63,	153,	539,	23·3	25·5	118·7
South „	763,	2,732,	1,474,	307,	65,	175,	876,	20·8	23·4	98·0
Total of Wales	1,384,	5,103,	2,719,	592,	142,	347,	1,546,	21·7	23·2	105·7
Total of Scot- land	3,188,	19,639,	4,413,	1,386,	673,	1,261,	1,017,	31·4	23·8	161·2
Total of Great Britain	24,837,	56,964,	29,956,	9,433,	3,386,	3,960,	12,136,	31·5	18·1	102·5

and Grass in 1868—Contd.

[000's omitted, consequently 2,875, = 2,875,000.]

12 Pigs.	13	14	15	16	17	18	19	20	21	22	23
— Number to every 100 Acres under Crops, Bare Fallow, and Grass.	Number of Acres Under										ENGLAND. Counties, Proper.
	Wheat.	Barley or Bere.	Oats.	Beans.	Peas.	Pota- toes.	Turnips and Swedes.	Man- gold.	Vetches, Lucerne, and any other Crops except Clover and Grass.	Bare Fallow, and Uncropped Arable Land.	
6·6	48,	29,	22,	11,	6,	2,	14,	4,	3,	13,	<i>North Midland—</i> Leicester Rutland Lincoln Nottingham Derby
5·3	10,	9,	4,	2,	1,	—	6,	—	—	3,	
7·2	308,	131,	105,	30,	20,	38,	133,	13,	12,	34,	
6·9	74,	46,	19,	13,	8,	5,	36,	3,	3,	18,	
7·7	34,	14,	30,	2,	2,	4,	14,	1,	2,	11,	
7·1	474,	229,	180,	58,	37,	49,	203,	21,	20,	79,	Total
10·9	39,	4,	44,	5,	1,	25,	9,	1,	1,	4,	<i>North-Western—</i> Chester Lancaster
4·9	38,	7,	52,	4,	—	40,	11,	1,	1,	9,	
7·4	77,	11,	96,	9,	1,	65,	20,	2,	2,	13,	Total
7·1	123,	46,	81,	13,	9,	10,	75,	2,	6,	27,	<i>York—</i> East Riding North „ West „
6·6	84,	54,	71,	11,	4,	10,	57,	1,	3,	37,	
5·3	109,	66,	60,	12,	5,	23,	64,	1,	5,	24,	
6·2	316,	166,	212,	36,	18,	43,	196,	4,	14,	88,	Total
2·9	47,	12,	42,	4,	3,	7,	23,	—	2,	26,	<i>Northern—</i> Durham { Northumber- land Cumberland Westmorland
2·4	43,	29,	69,	6,	4,	5,	51,	—	2,	22,	
5·2	26,	10,	73,	—	—	12,	35,	—	—	11,	
2·3	2,	3,	17,	—	—	2,	9,	—	—	2,	
3·3	118,	54,	201,	10,	7,	26,	118,	—	4,	61,	Total
8·4	3,375,	1,769,	1,480,	503,	290,	325,	1,596,	243,	282,	793,	{ Total of Eng- land
7·2	22,	11,	8,	1,	2,	2,	10,	1,	2,	7,	<i>Wales—</i> Monmouth North Wales South „
9·1	50,	50,	102,	2,	1,	24,	33,	2,	3,	33,	
6·2	80,	102,	155,	1,	1,	23,	37,	2,	3,	50,	
7·2	152,	163,	265,	4,	4,	49,	80,	5,	8,	90,	Total of Wales
3·2	125,	219,	1,012,	23,	2,	167,	489,	1,	12,	75,	{ Total of Scot- land
7·7	3,652,	2,152,	2,757,	530,	296,	541,	2,165,	249,	302,	958,	{ Total of Great Britain

Trade of United Kingdom, 1868-67-66.—*Distribution of Exports from United Kingdom according to the Declared Real Value of the Exports; and the Computed Real Value (Ex duty) of Imports at Port of Entry, and therefore including Freight and Importer's Profit*

Merchandise (<i>excluding Gold and Silver</i>), Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Nine Months.					
	1868.		1867.		1866.	
	Imports from	Exports to	Imports from	Exports to	Imports from	Exports to
I.—FOREIGN COUNTRIES:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland } Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium } Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries) } Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta } Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt } Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco } Western Africa } Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorla Islands } Indian Seas, Siam, Sumatra, Java, Philip- pines; other Islands } South Sea Islands } China, including Hong Kong } United States of America } Mexico and Central America } Foreign West Indies and Hayti } South America (Northern), New Granada, Venezuela, and Ecuador } „ (Pacific), Peru, Bolivia, } Chili, and Patagonia } „ (Atlantic) Brazil, Uruguay, } and Buenos Ayres } Whale Fisheries; Grnld., Davis' Straits, Southn. Whale Fishery, & Falkland Islands }	18,735,	5,199,	19,785,	5,412,	17,211,	4,63
	25,152,	27,747,	26,164,	25,310,	26,418,	19,91
	31,301,	11,542,	30,813,	13,116,	32,967,	13,02
	5,023,	5,333,	3,690,	5,660,	4,549,	5,81
	18,343,	10,278,	15,390,	11,302,	15,011,	12,60
	219,	191,	204,	224,	339,	21
	1,259,	672,	1,034,	639,	866,	42
	34,	115,	46,	84,	49,	14
	1,447,	1,363,	629,	1,787,	548,	1,88
	37,	35,	9,	20,	44,	12
	6,631,	7,127,	5,940,	6,161,	6,946,	6,63
	34,897,	16,523,	33,032,	17,756,	38,942,	22,06
	768,	775,	853,	625,	615,	1,12
	3,964,	2,394,	4,092,	2,503,	2,658,	2,83
	990,	2,021,	980,	1,977,	1,481,	2,64
	5,662,	2,156,	5,826,	3,207,	4,381,	2,10
	7,242,	5,576,	6,510,	7,387,	7,875,	8,45
	70,	10,	74,	8,	89,	1
Total—Foreign Countries	161,774,	99,057,	155,071,	103,178,	160,926,	104,64
II.—BRITISH POSSESSIONS:						
British India, Ceylon, and Singapore	21,468,	18,156,	20,954,	17,710,	29,889,	17,02
Austral. Cols.—N. So. W., Vict., and Queensld.	7,609,	5,918,	7,687,	4,368,	6,652,	6,49
„ „ So. Aus., W. Aus., Tasm., and N. Zealand	2,846,	2,135,	3,361,	2,095,	3,128,	3,17
British North America	3,211,	4,350,	3,531,	5,424,	3,433,	6,31
„ W. Indies with Btsh. Guiana & Honduras	5,721,	1,875,	5,163,	1,782,	5,484,	2,02
Cape and Natal	1,730,	1,169,	1,770,	1,501,	1,316,	1,01
Br. W. Co. of Af., Ascension and St. Helena	317,	413,	338,	477,	404,	41
Mauritius	832,	312,	715,	313,	1,148,	44
Channel Islands	302,	419,	290,	354,	330,	37
Total—British Possessions	44,036,	34,747,	43,809,	34,024,	51,784,	37,29
General Total£	205,810,	133,804,	198,880,	137,202,	212,710,	141,93

IMPORTS. — (United Kingdom.) — Whole Years, 1868-67-66-65-64. — *Computed Real Value (Ex-duty), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(Whole Years.) [000's omitted.] FOREIGN ARTICLES IMPORTED.		1868.	1867.	1866.	1865.	1864.
		£	£	£	£	£
RAW MATLS.— <i>Textile.</i>	Cotton Wool	55,199,	51,998,	77,521,	66,032,	78,204,
	Wool (Sheep's) ..	15,304,	16,461,	17,959,	15,367,	15,998,
	Silk	19,349,	16,128,	15,896,	18,135,	12,940,
	Flax	5,098,	4,180,	4,469,	5,370,	5,323,
	Hemp	4,030,	3,080,	3,215,	3,531,	3,976,
	Indigo	2,854,	2,422,	2,208,	2,004,	2,248,
		101,834,	94,269,	121,268,	110,439,	118,689,
" " <i>Various.</i>	Hides	3,624,	3,070,	3,342,	3,044,	3,132,
	Oils	4,035,	4,086,	4,482,	4,311,	3,390,
	Metals	5,198,	4,627,	4,953,	5,185,	4,504,
	Tallow	2,944,	2,419,	3,009,	3,125,	2,077,
	Timber	10,279,	9,322,	10,459,	11,501,	10,946,
		26,080,	23,524,	26,245,	27,166,	24,049,
" " <i>Agricltl.</i>	Guano	1,977,	2,109,	1,448,	2,676,	1,463,
	Seeds	4,348,	3,260,	3,375,	4,983,	3,947,
		6,325,	5,369,	4,823,	6,659,	5,410,
TROPICAL & C., PRODUCE.	Tea	12,431,	10,068,	11,130,	10,004,	9,439,
	Coffee	4,858,	4,362,	4,088,	4,604,	3,616,
	Sugar & Molasses	15,024,	13,091,	12,204,	13,002,	16,458,
	Tobacco	2,410,	2,380,	2,627,	3,250,	3,361,
	Rice	2,895,	2,026,	1,539,	1,331,	1,809,
	Fruits	2,513,	1,474,	1,267,	1,371,	1,172,
	Wines	5,441,	4,835,	4,733,	3,914,	5,003,
	Spirits	2,086,	2,070,	2,101,	1,508,	1,990,
		47,658,	40,306,	39,689,	39,024,	42,848,
FOOD	Grain and Meal.	39,228,	41,084,	29,802,	20,643,	19,709,
	Provisions	13,859,	9,690,	10,463,	10,295,	9,740,
		53,087,	50,774,	40,265,	30,938,	29,449,
Remainder of Enumerated Articles		14,632,	6,620,	6,424,	5,525,	5,612,
TOTAL ENUMERATED IMPORTS		249,616,	220,862,	238,714,	219,751,	226,057,
Add for UNENUMERATED IMPORTS (say)		62,404,	54,215,	59,678,	54,937,	56,511,
TOTAL IMPORTS		312,020,	275,077,	298,392,	274,688,	282,568,

EXPORTS.—(United Kingdom).—Whole Years, 1868-67-66-65-64.—*Declared Real Value, at Port of Shipment, of Articles of BRITISH and IRISH Produce and Manufactures Exported from United Kingdom.*

(Whole Years.) [000's omitted.] BRITISH PRODUCE, &C., EXPORTED.		1868.	1867.	1866.	1865.	1864.
		£	£	£	£	£
MANFRS.—Textile.	Cotton Manufactures ..	52,832,	55,973,	60,865,	46,904,	45,760,
	„ Yarn	14,709,	14,871,	13,700,	10,351,	9,096,
	Woollen Manufactures	19,526,	20,134,	21,726,	20,102,	18,566,
	„ Yarn	6,376,	5,822,	4,734,	5,424,	5,422,
	Silk Manufactures.....	2,107,	1,603,	1,698,	1,884,	2,018,
	„ Yarn	215,	179,	248,	294,	297,
	Linen Manufactures	7,094,	7,473,	9,576,	9,155,	8,158,
	„ Yarn	2,309,	2,454,	2,380,	2,505,	3,010,
		105,168,	108,509,	114,927,	96,619,	92,327,
	Sewed. Apparel	2,290,	2,208,	2,877,	2,640,	2,584,
	Haberd. and Millnry.	4,476,	4,438,	5,403,	5,014,	4,787,
		6,766,	6,646,	8,280,	7,654,	7,371,
METALS	Hardware	3,846,	3,934,	4,378,	4,334,	4,159,
	Machinery	4,724,	4,964,	4,749,	5,214,	4,854,
	Iron	15,022,	15,127,	14,829,	13,451,	13,214,
	Copper and Brass.....	3,210,	3,273,	2,831,	3,166,	3,911,
	Lead and Tin	3,600,	3,318,	3,169,	2,847,	2,786,
	Coals and Culm	5,356,	5,400,	5,084,	4,432,	4,162,
		35,758,	36,016,	35,040,	33,444,	33,086,
Ceramic Manufcts.	Earthenware and Glass	2,432,	2,435,	2,454,	2,186,	2,179,
Indigenous Mnfrs.	Beer and Ale.....	1,866,	1,910,	2,056,	2,060,	1,823,
	Butter	272,	266,	361,	334,	328,
	Cheese	103,	128,	164,	111,	149,
	Candles	202,	183,	222,	109,	142,
	Salt	485,	451,	378,	276,	281,
	Spirits	169,	163,	151,	245,	503,
	Soda	1,505,	1,615,	1,611,	1,125,	917,
		4,602,	4,716,	4,943,	4,260,	4,142,
Various Manufcts.	Books, Printed	686,	613,	602,	517,	466,
	Furniture	200,	200,	237,	290,	259,
	Leather Manufactures	2,435,	1,858,	2,043,	2,462,	2,404,
	Soap	257,	289,	241,	184,	231,
	Plate and Watches ...	409,	417,	413,	404,	427,
	Stationery	418,	378,	389,	403,	354,
		4,405,	3,755,	3,925,	4,260,	4,141,
Remainder of Enumerated Articles		11,252,	10,542,	10,664,	9,703,	9,648,
Unenumerated Articles.....		9,080,	8,565,	8,595,	7,736,	7,542,
	TOTAL EXPORTS.....	179,463,	181,184,	188,828,	165,862,	160,436,

SHIPPING.—FOREIGN TRADE.—(United Kingdom.)—Years, 1868-67-66-65.—

Vessels Entered and Cleared with Cargoes, including repeated Voyages, but excluding Government Transports.

(Whole Years.) ENTERED:—	1868.			1867.		1866.		1865.	
	Vessels.	Tonnage (000's omitted.)	Average Tonnage.	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)
	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
<i>Vessels belonging to—</i>									
Russia	567	190,	335	522	188,	475	172,	522	178,
Sweden	1,266	228,	180	1,151	213,	1,126	211,	1,023	188,
Norway	4,154	1,018,	245	4,086	979,	3,903	939,	3,676	875,
Denmark	2,356	274,	116	2,159	255,	2,261	244,	2,125	226,
Prussia and Ger. Sts.	3,455	690,	200	3,147	622,	4,141	1,018,	3,959	924,
Holland and Belgium....	2,515	679,	270	2,368	587,	2,031	282,	2,080	286,
France	2,497	239,	96	2,617	238,	3,067	282,	3,305	301,
Spain and Portugal	523	182,	348	485	159,	396	124,	419	127,
Italy & other Eupn. Sts.	864	316,	365	871	284,	1,185	354,	1,154	331,
United States	477	458,	960	439	455,	408	431,	343	363,
All other States	14	5,	356	9	5,	14	5,	23	7,
	18,688	4,279,	229	17,854	3,985,	19,007	4,062,	18,629	3,806,
United Kingdm. & } Depds.....	27,291	9,572,	351	27,050	9,355,	27,382	9,214,	25,881	8,358,
<i>Totals Entered....</i>	45,979	13,851,	301	44,904	13,340,	46,389	13,276,	44,510	12,164,
<i>CLEARED:—</i>									
Russia	488	171,	350	460	174,	425	160,	444	155,
Sweden	1,201	201,	167	1,105	192,	1,068	196,	927	156,
Norway	2,537	519,	204	2,315	472,	2,195	442,	1,995	379,
Denmark	2,684	306,	114	2,468	282,	2,367	256,	2,399	251,
Prussia and Ger. Sts.	4,853	866,	178	4,630	811,	5,391	1,252,	5,382	1,093,
Holland and Belgium....	3,076	885,	288	2,865	776,	2,043	329,	2,258	352,
France	4,093	462,	113	4,485	501,	4,231	454,	4,128	431,
Spain and Portugal	497	181,	364	467	158,	376	121,	415	127,
Italy & other Eupn. Sts.	1,079	412,	381	1,076	377,	1,317	422,	1,321	421,
United States	608	564,	928	517	515,	507	514,	394	397,
All other States	17	6,	353	13	3,	24	9,	38	9,
	21,133	4,573,	216	20,401	4,261,	19,944	4,055,	19,701	3,771,
United Kingdm. & } Depds.....	31,775	10,902,	343	31,053	10,586,	29,764	9,952,	28,480	9,046,
<i>Totals Cleared....</i>	52,908	15,475,	294	51,454	14,847,	49,708	14,007,	48,181	12,817,

GOLD AND SILVER BULLION AND SPECIE. — IMPORTED AND EXPORTED. — (United Kingdom.) — *Computed Real Value for the Whole Years, 1868-67-66.*

[000's omitted.]

(Whole Years.)	1868.		1867.		1866.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
Imported from:—	£	£	£	£	£	£
Australia	6,990,	1,	5,802,	—	6,840,	1,
So. Amca. and W. } Indies	1,690,	3,429,	3,424,	5,105,	2,169,	4,470,
United States and } Cal.	6,976,	1,916,	5,026,	1,472,	8,412,	1,833,
	15,656,	5,346,	14,252,	6,577,	17,421,	6,304,
France	280,	1,045,	387,	1,001,	2,843,	2,498,
Hanse Towns, Holl. } & Belg.	47,	509,	87,	194,	770,	870,
Prtgl., Spain, and } Gbrltr.	470,	120,	347,	111,	612,	152,
Mlta., Trky., and } Egypt	77,	95,	146,	67,	260,	80,
China	—	—	—	—	—	—
West Coast of Africa	119,	8,	146,	3,	120,	19,
All other Countries....	487,	593,	435,	67,	1,484,	854,
<i>Totals Imported....</i>	17,136,	7,716,	15,800,	8,020,	23,510,	10,777,
Exported to:—						
France	7,190,	1,822,	6,034,	2,190,	8,465,	2,090,
Hanse Towns, Holl. } & Belg.	1,111,	3,602,	308,	3,345,	1,073,	3,137,
Prtgl., Spain, and } Gbrltr.	650,	1,	354,	7,	162,	107,
	8,951,	5,425,	6,696,	5,542,	9,700,	5,334,
Ind. and China (viâ } Egypt)	1,498,	1,439,	242,	647,	458,	2,538,
Danish West Indies	—	—	—	—	—	—
United States	112,	—	63,	—	1,015,	—
South Africa	63,	—	71,	—	5,	—
Mauritius	—	—	—	—	—	—
Brazil	1,013,	58,	306,	95,	945,	89,
All other Countries....	1,071,	520,	511,	153,	619,	967,
<i>Totals Exported....</i>	12,708,	7,512,	7,889,	6,437,	12,742,	8,928,
<i>Excess of Imports</i>	4,428,	204,	7,911,	1,583,	10,768,	1,849,
„ <i>Exports</i>	—	—	—	—	—	—

REVENUE.—(UNITED KINGDOM.)—31ST DECEMBER, 1868-67-66-65.

Net Produce in YEARS and QUARTERS ended 31st Dec., 1868-67-66-65.

[000's omitted.]

QUARTERS, ended 31st Dec.	1868.	1867.	1868.		Corresponding Quarters.	
			Less.	More.	1866.	1865.
	£	£	£	£	£	£
Customs	5,998,	6,102,	104,	—	5,964,	5,670,
Excise	5,431,	5,092,	—	339,	5,471,	5,110,
Stamps	2,220,	2,296,	76,	—	2,308,	2,373,
Taxes	1,287,	1,317,	30,	—	1,358,	1,317,
Post Office	1,150,	1,180,	30,	—	1,140,	1,130,
	16,086,	15,987,	240,	339,	16,241,	15,600,
Property Tax	2,018,	885,	—	1,133,	1,314,	1,451,
	18,104,	16,872,	240,	1,472,	17,555,	17,051,
Crown Lands	112,	100,	—	12,	95,	90,
Miscellaneous	863,	553,	—	309,	682,	866,
<i>Totals</i>	19,079,	17,525,	240,	1,793,	18,332,	18,007,
			NET INCR. £1,553,115			

YEARS, ended 31st Dec.	1868.	1867.	1868.		Corresponding Quarters.	
			Less.	More.	1866.	1865.
	£	£	£	£	£	£
Customs	22,486,	22,630,	144,	—	21,915,	21,707,
Excise	20,214,	19,955,	—	259,	20,616,	19,649,
Stamps	9,174,	9,597,	423,	—	9,291,	9,636,
Taxes	3,477,	3,484,	7,	—	3,463,	3,364,
Post Office	4,560,	4,630,	70,	—	4,375,	4,250,
	59,911,	60,296,	644,	259,	59,660,	58,606,
Property Tax	8,414,	5,266,	—	3,148,	5,458,	7,603,
	68,325,	65,562,	644,	3,407,	65,118,	66,209,
Crown Lands	359,	337,	—	22,	327,	314,
Miscellaneous	3,176,	2,764,	—	412,	3,340,	2,673,
<i>Totals</i>	71,860,	68,663,	644,	3,841,	68,785,	69,196,
			NET INCR. £3,197,161			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 31ST DEC., 1868:—

An Account showing the REVENUE and other RECEIPTS of the QUARTER ended 31st December, 1868; the APPLICATION of the same, and the Charge of the Consolidated Fund for the said Quarter, together with the Surplus or Deficiency upon such Charge.

Received:—

Surplus Balance beyond the Charge of the <i>Consolidated Fund</i> for the Quarter ended 30th September, 1868, viz.:—	£
Great Britain	—
Ireland	£145,960
	145,960
Income received, as shown in Account I	19,079,095
Amount received as Advances in Aid of Ways and Means	1,000,000
" in repayment of Advances for Public Works, &c.	398,895
" for New Courts of Justice.....	24,000
" for Greenwich Hospital.....	122,284
	£20,770,234
Balance, being the Deficiency on 31st December, 1868, upon the charge of the Consolidated Fund in Great Britain, to meet the Dividends and other charges payable in the Quarter to 31st March, 1869	4,562,375
	£25,332,609

Paid:—

	£
Deficiency of the Income of the Consolidated Fund in Great Britain in the Quarter to 30th September, 1868, for the Charge of the Consolidated Fund in Great Britain for that Quarter (as shown in preceding account)	3,007,408
Amount issued to repay Advances in aid of Ways and Means	1,000,000
Amount applied out of the Income to <i>Supply Services</i> (including 1,500,000% on account of the expedition to Abyssinia).....	12,343,076
Amount advanced for New Courts of Justice	64,000
" Greenwich Hospital	22,284
Charge of the <i>Consolidated Fund</i> for the Quarter ended 31st December, 1868, viz.:—	
Interest of the Permanent Debt	£6,086,920
Terminable Annuities	931,965
Interest of Exchequer Bonds	11,375
" " Bills	34,465
Interest of Advances on account of Ways and Means	3,879
Interest of Advances on account of Deficiency ...	466
The Civil List	101,631
Other Charges on Consolidated Fund	377,532
Advances for Public Works, &c.	410,720
	7,958,953
<i>Surplus Balance</i> in Ireland beyond the Charge of the Consolidated Fund in Ireland for the Quarter ended 31st December, 1868	936,888
	£25,332,609

BRITISH CORN.—*Gazette Average Prices (ENGLAND AND WALES),
Fourth Quarter of 1868.*

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on a Saturday, 1868.		Weekly Average. (Per Impl. Quarter.)					
		Wheat.		Barley.		Oats.	
		s.	d.	s.	d.	s.	d.
Oct.	3	54	4	44	9	26	11
"	10	54	3	45	2	27	9
"	17	53	8	45	7	27	1
"	24	53	4	45	11	28	11
"	31	52	11	46	1	28	—
<i>Average for October</i>		53	8	45	6	27	8
Nov.	7	52	3	46	7	28	5
"	14	52	—	46	9	28	—
"	21	51	6	47	3	28	4
"	28	51	—	47	—	27	4
<i>Average for November</i>		51	8	46	10	28	—
Dec.	5	50	1	46	3	29	8
"	12	49	8	45	9	27	3
"	19	49	5	45	3	27	7
"	26	50	7	46	1	26	2
<i>Average for December</i>		49	11	45	10	27	8
<i>Average for the quarter</i>		51	11	46	—	27	9
<i>Average for the year</i>		63	9	43	—	28	1

RAILWAYS.—PRICES, October—December;—and TRAFFIC, January—December, 1868.

[Abstract from "Herepath's Journal" and the "Times."]

Total Capital Ex- pended Mlms.	Railway.	For the (£100). Price on			Miles Open.		Total Traffic. 52 Weeks. (000's omitted.)		Traffic pr. Mile pr. Wk. 52 Weeks.		Dividends per Cent. for Half Years.		
		1st Dec.	2nd Nov.	1st Oct.	'68.	'67.	'68.	'67.	'68.	'67.	30 June, '68.	31 Dec. '67.	30 Jun. '67.
£					No.	No.	£	£	£	£	s. d.	s. d.	s. d.
56,9	Lond. & N. Westn.	112 $\frac{3}{4}$	112 $\frac{1}{4}$	112 $\frac{3}{4}$	1,372	1,348	6,394,	6,396,	91	93	52 6	67 6	52 6
49,5	Great Western	49	48 $\frac{3}{4}$	49 $\frac{3}{4}$	1,386	1,358	3,923,	3,884,	60	56	12 6	15 —	12 6
20,8	„ Northern...	106 $\frac{1}{2}$	105 $\frac{1}{2}$	109	487	487	2,125,	2,104,	82	80	42 6	75 —	45 —
28,1	„ Eastern	41 $\frac{1}{2}$	43 $\frac{1}{4}$	40 $\frac{3}{4}$	728	728	1,960,	1,872,	57	54	Nil	Nil	Nil
17,2	Brighton	48 $\frac{1}{4}$	50 $\frac{1}{2}$	52 $\frac{1}{4}$	365	336	1,278,	1,243,	72	77	„	„	„
20,1	South-Eastern	79 $\frac{1}{2}$	78 $\frac{1}{2}$	79	346	330	1,412,	1,369,	79	85	22 6	40 —	20 —
16,9	„ Western....	89	89	89	503	503	1,387,	1,362,	58	54	40 —	52 6	37 6
209,5		75 $\frac{1}{8}$	75 $\frac{3}{8}$	76	5,187	5,090	18,479,	18,230,	71	71	24 3	35 8	23 11
32,9	Midland	111 $\frac{3}{4}$	112 $\frac{1}{2}$	111 $\frac{1}{2}$	774	761	2,964,	2,826,	78	80	50 —	55 —	55 —
22,9	Lancsh. and York.	128 $\frac{3}{4}$	128 $\frac{3}{4}$	128 $\frac{1}{2}$	411	403	2,534,	2,449,	121	123	67 6	65 —	65 —
15,8	Sheffield and Man.	48	47 $\frac{3}{4}$	47	251	251	1,094,	1,095,	87	91	Nil	20 —	10 —
39,9	North-Eastern	100 $\frac{1}{2}$	100 $\frac{1}{2}$	100	1,258	1,242	3,794,	3,770,	60	60	45 —	60 —	50 —
111,5		97 $\frac{1}{4}$	97 $\frac{3}{8}$	96 $\frac{3}{4}$	2,694	2,657	10,386,	10,140,	86	88	40 7	50 —	45 —
21,9	Caledonian	73 $\frac{3}{4}$	73	69 $\frac{1}{4}$	1,398	1,398	3,359,	3,246,	48	46	15 —	25 —	52 6
6,1	Gt. S. & Wn. Irlnd.	97	97	97	419	419	—	—	—	—	50 —	45 —	50 —
349,0	<i>Gen. aver.</i>	83 $\frac{1}{2}$	83 $\frac{5}{8}$	83 $\frac{1}{2}$	9,698	9,564	32,224,	31,616,	83	83	30 7	40 —	34 7

Consols.—Money Prices, 1st Dec., 94 to $\frac{1}{8}$.—2nd Nov., 94 $\frac{1}{4}$ to $\frac{3}{8}$.—1st Oct., 94 $\frac{1}{4}$ to $\frac{3}{8}$.

Exchequer Bills.—1st Dec., 12s. to 17s. pm.—2nd Nov., 17s. to 21s. pm.—1st Oct., 16s. to 20s. pm.

BANK OF ENGLAND.—WEEKLY RETURN.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the FOURTH QUARTER (Oct.—Dec.) of 1868.

[0,000's omitted.]

ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.		Assets.			Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
Notes Issued.	DATES. (Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.		
£ Mlms.	1868.	£ Mlms.	£ Mlms.	£ Mlms.	£ Mlms.	1867. Per ann. 25 July 2 p. ct.
34,69	Oct. 7 ...	11,01	3,98	19,69	24,65	
34,08	„ 14 ...	11,01	3,98	19,08	24,41	
33,85	„ 21 ...	11,01	3,98	18,85	24,49	
33,75	„ 28 ...	11,01	3,98	18,75	24,18	
33,42	Nov. 4 ...	11,01	3,98	18,42	24,51	1868. 19 Nov. 2½ „
33,23	„ 11 ...	11,01	3,98	18,23	23,94	
32,20	„ 18 ...	11,01	3,98	17,20	23,49	
32,14	„ 25 ...	11,01	3,98	17,14	23,25	
32,01	Dec. 2 ...	11,01	3,98	17,01	23,51	
31,76	„ 9 ...	11,01	3,98	16,76	23,20	
31,90	„ 16 ...	11,01	3,98	16,90	22,72	
31,90	„ 23 ...	11,01	3,98	16,90	22,72	
32,27	„ 30 ...	11,01	3,98	17,27	23,52	

BANKING DEPARTMENT.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					DATES. (Wdnsdys.)	Assets.				Totals of Liabili- ties and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
£ Mlms.	£ Mlms.	£ Mlms.	£ Mlms.	£ Mlms.	1868.	£ Mlms.	£ Mlms.	£ Mlms.	£ Mlms.	£ Mlms.
14,55	3,62	5,31	18,02	,65	Oct. 7	15,04	16,05	10,04	1,01	42,15
14,55	3,08	3,84	20,23	,70	„ 14	15,94	15,82	9,67	1,08	42,41
14,55	3,09	3,55	20,41	,67	„ 21	15,94	15,88	9,36	1,10	42,27
14,55	3,09	4,13	19,92	,67	„ 28	15,94	15,70	9,57	1,09	42,36
14,55	3,08	4,28	18,92	,64	Nov. 4	15,48	15,73	8,91	1,05	41,18
14,55	3,08	4,74	19,25	,59	„ 11	15,48	16,32	9,29	1,13	42,23
14,55	3,09	5,03	18,76	,60	„ 18	15,30	16,87	8,71	1,15	42,04
14,55	3,09	5,43	18,10	,57	„ 25	15,07	16,66	8,89	1,12	41,75
14,55	3,07	5,57	18,08	,56	Dec. 2	15,07	17,19	8,50	1,08	41,84
14,55	3,06	6,36	17,61	,51	„ 9	15,07	17,38	8,56	1,08	42,09
14,55	3,07	5,96	17,97	,45	„ 16	14,07	17,49	9,18	1,26	42,00
14,55	3,07	5,96	17,98	,45	„ 23	14,07	17,49	9,18	1,26	42,00
14,55	3,09	7,30	19,49	,40	„ 30	14,12	20,78	8,75	1,18	44,84

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND and WALES on Saturday in each Week during the FOURTH QUARTER (October—December) of 1868; and in SCOTLAND and IRELAND, at the Three Dates, as under.

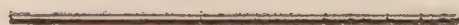
[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES. <i>Saturday.</i>	<i>London:</i> Cleared in each Week ended <i>Wednesday.*</i>	Private Banks. (Fixed Issues, 4,04).	Joint Stock Banks. (Fixed Issues, 2,74).	TOTAL. (Fixed Issues, 6,78).	Weeks ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 2,75).	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6,35).
1868.	£	£	£	£	1868.	£	£	£	£	£	£
Oct. 3	64,30	2,81	2,32	5,13	Oct. 10	1,79	2,88	4,67	3,36	3,13	6,50
" 10	65,89	2,90	2,39	5,29							
" 17	63,17	2,94	2,41	5,35							
" 24	74,95	2,92	2,40	5,32							
" 31	54,26	2,94	2,37	5,31	.						
Nov. 7	79,35	2,89	2,36	5,25	Nov. 7	1,84	2,92	4,76	3,65	3,41	7,06
" 14	60,76	2,83	2,34	5,17							
" 21	75,36	2,80	2,31	5,11							
" 28	56,67	2,78	2,30	5,08							
Dec. 5	75,64	2,75	2,27	5,02	Dec. 5	1,93	3,21	5,14	3,58	3,47	7,05
" 12	64,27	2,72	2,25	4,97							
" 19	74,90	2,71	2,24	4,95							
" 26	64,93	2,72	2,25	4,97							

* The Wednesdays preceding the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under, LONDON on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on LONDON—with collateral cols.*

1	2	3	4	5	6	7	8	9	10	11	12	13	14
DATES.	Paris.				Hamburg.			New York.	Calcutta.		Hong Kong.	Syd- ney.	Stand- ard Silver in bars in Lon- don. pr. oz.
	London on Paris. 3 m. d.	Bullion as arbitrated.		Prem. or Dis. on Gold per mille.	London on Hambg. 3 m. d.	Bullion as arbitrated.			India Council 60 d. s.	At Calcutta on London. 6 m. d.			
		Agnst. Engd.	For Engd.			Agnst. Engd.	For Engd.						
1868.		pr. ct.	pr. ct.			pr. ct.	pr. ct.	pr. ct.	d.	d.	d.	pr. ct.	d.
Oct. 3 ..	25.40	—	.2	par.	13.11	—	—	108 $\frac{7}{8}$	23 $\frac{3}{8}$	23 $\frac{1}{2}$	54 $\frac{1}{2}$	$\frac{1}{2}$ pm.	60 $\frac{1}{4}$
„ 17 ..	„	—	—	„	„	—	—	109 $\frac{3}{4}$	„	„	54	„	„
Nov. 7 ..	37 $\frac{1}{2}$	—	—	„	10 $\frac{1}{4}$	—	—	„ $\frac{1}{2}$	„ $\frac{1}{2}$	„ $\frac{3}{8}$	„	„	61
„ 21 ..	40	—	—	„	• $\frac{3}{4}$	—	—	„ $\frac{1}{8}$	„	„ $\frac{5}{8}$	53 $\frac{1}{4}$	„	60 $\frac{5}{8}$
Dec. 5 ..	37 $\frac{1}{2}$	—	—	„	• $\frac{1}{2}$	—	—	„ $\frac{1}{4}$	„ $\frac{3}{4}$	„ $\frac{3}{4}$	„ $\frac{3}{4}$	„	„ $\frac{3}{4}$
„ 19 ..	40	—	.1	„	„	—	—	—	„	—	—	—	„ $\frac{7}{8}$



JOURNAL OF THE STATISTICAL SOCIETY,

JUNE, 1869.

REPORT of the COUNCIL for the FINANCIAL YEAR ended 31st December, 1868, and for the SESSIONAL YEAR ended 15th March, 1869, presented at the THIRTY-FIFTH ANNIVERSARY MEETING of the STATISTICAL SOCIETY, held at the Society's Rooms, 12, St. James's Square, on Monday, 15th March, 1869; with the PROCEEDINGS of that Meeting.

JAMES HEYWOOD, M.A., F.R.S., Vice-President, in the Chair.

It has again become the duty of the Council to report to the Fellows the transactions of an expiring year. The Session which terminates to-day is the *thirty-fifth*, counting from the establishment of the Society.

The following statement represents in a concise form the changes which have taken place in the Fellowship during the past and passing sessional years:—

	1868-69.	1867-68.
Number of Fellows on 1st of March	378	372
Life Members included in above	62	63
Members lost during year by death or resig- nation	21	22
New Members elected	32	28

The principal items of the Society's financial position for the years ended with December, 1867 and 1868, are the following:—

	Past Year.	Previous Year.
	£	£
Balance at beginning of year	146	199
Receipts from all sources during year	796	778
Cash balance at end of year	216	146
Surplus of assets over liabilities at end of year	1,877	1,822

The subjoined list gives the titles of the papers read during the Session, together with the names of the respective authors.

PAPERS READ DURING THE THIRTY-FIFTH SESSION.

- March 17, 1868.—*Mr. James Caird*.—On the Agricultural Statistics of the United Kingdom.
- April 21, „ *Mr. Samuel Brown*.—On the Population Statistics of Europe compared.
- May 19, „ *Mr. Leonard H. Courtney*.—On the Finances of the United States. [A paper by *Mr. D. Bikélas*, On the Statistics of Greece, was taken as read.]
- June 16, „ *Mr. J. H. Elliott*.—On the Increase of Material Prosperity, and of Moral Agencies compared with the State of Crime and Pauperism.
- Nov. 17, „ *Professor Jevons, M.A.*—On the Amount of the Metallic Currency of the United Kingdom, with reference to the Question of International Coinage.
- Dec. 15, „ *Dr. R. James Mann*.—Statistical Notes regarding the Colony of Natal.
- „ „ *Mr. D. H. Fielder*.—On Tea Cultivation in India.
- Jan. 19, 1869.—*Mr. R. Dudley Baxter, M.A.*—On the Taxation of the United Kingdom. [This paper did not appear in the *Journal*, but has been published in a separate form by the author.]
- Feb. 18, „ *Mr. Horace Mann*.—On the Cost and Organisation of the Civil Service.

These papers have attracted an amount of interest not surpassed by those of any of the previous years, and the Fellows of the Society will remember that on several occasions the rooms where the papers are read, were almost inconveniently crowded. The Council have endeavoured to remove the discomfort with which this crowded attendance was accompanied, by an improvement in the ventilation.

The Council had entertained a hope that some aid would have been afforded by Government in the provisions about to be made in regard to the buildings erecting for the use of the learned and scientific societies of the metropolis: the objects and pursuits of the Statistical Society are of such general use, scientific interest, and are so beneficial to the empire at large, that they have thought such aid might not be unreasonably supplied to it. At present, however, the Council are unable to offer any assurance of Government assistance in this respect, yet they do not neglect the subject, and hope that the time may come when either alone, or in conjunction with some other associations of a kindred character, they may find favour with the Government and with Parliament for this object.

The Council regret to have to announce that Dr. Guy, who has for many years acted as one of the Honorary Secretaries, and for a considerable part of that time filled the arduous office of Editor of the *Journal*, has on account of the pressure of other occupations, resigned his office of Secretary. The loss of his assistance is greatly felt by the Council, and they believe that the Society also will fully concur with them in their expression of regret, at the same time that they render to Dr. Guy their thanks for the very valuable aid which he has so long rendered to the Council and to the Society.

The thirty-eighth meeting of the British Association for the Promotion of Science was held at Norwich, in August last. On that occasion the Section devoted to the investigation and discussion of "Economic Science and Statistics," was presided over by Mr. Samuel Brown, the President of the Institute of Actuaries, and one of the most zealous cultivators of statistical knowledge among ourselves. The opening address which Mr. Brown then delivered, and a few of the more valuable of the statistical papers read in the Section, have been printed in the *Journal*.

In conclusion, the Council would direct the attention of the meeting to the satisfactory condition of the Society as certified by the Auditors. The Balance of Assets in favour of the Society on 31st December last, was 1,876*l.* 12*s.* 11*d.*, of which amount 1,042*l.* 12*s.* 11*d.* was the purchase value of 1,100*l.* of Government stock, and 213*l.* 11*s.* 6*d.* cash balance at Messrs. Drummond's bank. Since that date the Council have purchased 100*l.* New Three per Cents., therefore the stock in the names of the trustees is now 1,200*l.*

COUNCIL AND OFFICERS FOR 1869-70.

President.

WILLIAM NEWMARCH, F.R.S.

Council.

Walter Bagehot, M.A.	<i>Archibald Hamilton.</i>
Major-General Balfour, C.B.	James Thomas Hammick.
Thomas Graham Balfour, M.D., F.R.S.	Frederick Hendriks.
R. Dudley Baxter, M.A.	James Heywood, M.A., F.R.S.
Samuel Brown.	William Barwick Hodge.
<i>James Caird.</i>	Francis Jourdan.
William Camps, M.D.	Professor Leone Levi.
Hyde Clarke, D.C.L.	Sir John Lubbock, Bart., F.R.S.
Leonard Henry Courtney.	William Golden Lumley, LL.M., Q.C.
<i>Sir Charles Wentworth Dilke, Bart.,</i> <i>M.P.</i>	Sir James Ranald Martin, C.B., F.R.S.
William Farr, M.D., D.C.L., F.R.S.	William Newmarch, F.R.S.
<i>Francis Galton, F.R.S.</i>	Frederick Purdy.
The Right Hon. W. E. Gladstone, M.P.	Colonel W. H. Sykes, M.P., F.R.S.
<i>John Glover.</i>	<i>William Pollard-Urquhart, M.P.</i>
William Augustus Guy, M.B., F.R.S.	Professor Jacob Waley, M.A.
	<i>John Walter, M.P.</i>

*The names of the New Members of the Council are printed in Italics.**Treasurer.*

James Thomas Hammick.

Honorary Secretaries.

William Golden Lumley, LL.M., Q.C. Frederick Purdy.

William Barwick Hodge.

A vote of thanks to the President, Council, and Officers, for their services during the past year, was carried unanimously.

A vote of thanks to the Chair terminated the proceedings.

(I.)—RECEIPTS and PAYMENTS of the STATISTICAL SOCIETY for the YEAR 1868.

RECEIPTS.			PAYMENTS.		
	£	s. d.		£	s. d.
Balance in Bank, } 31st December, } 1867	£131	19 9	Rent of Rooms	100	- -
Balance of Petty } Cash	10	17 1	Salaries	178	15 -
Balance of Adver- } tisement Cash ... }	3	4 6	Journal, Printing	£287	6 -
			„ Index	5	5 -
	146	1 4		292	11 -
1868.			Advertising	21	8 -
Dividends on Consols	32	3 6	Ordinary Meeting Expenses	30	4 1
Subscriptions, viz.:—			Library	17	1 -
13 Arrears	£27	6 -	Stationery and Miscellaneous } Printing	30	18 -
278 for 1868	583	16 -	Postages	21	- -
5 „ '69	10	10 -	Fire and Light	4	- 6
	621	12 -	Furniture and Repairs	8	2 1
1 Composition	21	- -	Incidental Expenses	21	11 8
Journal Sales	£109	6 10	Balance in Bank, } 31st December, } 1868	£213	11 6
„ Advertise- } ments	11	16 3	Balance of Petty } Cash	1	- 7
	121	3 1	Balance of Adver- } tisement Cash ... }	1	16 6
				216	8 7
	£941	19 11		£941	19 11

(II.)—BALANCE SHEET of ASSETS and LIABILITIES on 31st DECEMBER, 1868.

LIABILITIES.			ASSETS.		
	£	s. d.		£	s. d.
Printing <i>Journal</i> for } December (say)..... }	80	- -	Cash Balance	216	8 7
Making Index to above	5	5 -	Investments, viz.:—		
		85 5 -	New 3 per Cents. } (£771 4s. 8d.) ... }	£742	12 1
Miscellaneous Print- } ing and Stationery } (say)	10	- -	3 per Cent. Consols } (£328 15s. 4d.) }	300	- -
Carpenter	2	18 3		1,042	12 1
Plumber and Glazier ...	4	4 6	Property (Estimated Value):—		
Miscellaneous (say).....	10	- -	Books in Library	£400	
		27 2 9	<i>Journals</i> in Stock	200	
Balance in favour of Society ...	1,876	12 11	Furniture	100	
				700	- -
	£1,989	- 8	Arrears recoverable (say)	30	- -
				£1,989	- 8

“Auditors’ Report for 1868.

“STATISTICAL SOCIETY,

“12, ST. JAMES’S SQUARE, S.W.,

“London, 3rd February, 1869.

“The Auditors appointed to examine the Accounts of the Statistical Society herewith

“REPORT:—

“That they have carefully compared the Entries in the Books with the several *Vouchers* for the same, from the 1st January to the 31st December, 1868, and find them correct, showing the *Receipts* (including a Balance of 146*l.* 1*s.* 4*d.* from 1867) to have been 941*l.* 19*s.* 11*d.*, and the *Payments* 725*l.* 11*s.* 4*d.*, leaving a Balance in favour of the Society of 216*l.* 8*s.* 7*d.*

“They have also had laid before them, an estimate of the *Assets* and *Liabilities* of the Society, the *former* amounting to 1,989*l.* —*s.* 8*d.*, and the *latter* to 112*l.* 7*s.* 9*d.*,—showing a Balance in favour of the Society of 1,876*l.* 12*s.* 11*d.*

“They further find that at the end of the year 1867, the number of Fellows was 371, of whom 18 Died or Withdrew; and 34 new Fellows were elected during the year, leaving on the list, on the 31st December, 1868, 387 Fellows.

(Signed) “FRANCIS JOURDAN,
 “EDWD. T. BLAKELY, } *Auditors.*”
 “JOHN GLOVER.

On INSANITY and CRIME; and on the PLEA of INSANITY in CRIMINAL CASES. By WILLIAM A. GUY, M.B., F.R.S., Fellow of the Royal College of Physicians, Professor of Forensic Medicine, King's College, London, Physician to King's College Hospital, and one of the Vice-Presidents of the Statistical Society.

[Read before the Statistical Society, 20th April, 1869.]

I BELIEVE that I do not misrepresent the tendency of public opinion when I state, that, those who have experience of the insane show a growing disposition to attribute many acts of cruelty, violence, and fraud to unsoundness of mind; while those who have no such experience turn from these views with suspicion and aversion. Among the first class there are some who, not seeming to be otherwise unreasonable, go the length of attributing all crime to madness; and among the second class, others who, not appearing deficient either in humanity or discrimination, would see, without regret or misgiving, the sane murderer and the insane homicide hanging side by side on the same gallows. Perhaps, if we seek for them, we shall discover some facts couched in the language of figures, and amenable to the logic of the numerical method, which may go far to set these questions at rest; and perchance the truth, if we can discover it, will be found to set us free from the exaggerations which hang about the path of a special study, as well as from the panics which are apt to seize on those who make the safety of the State, and the protection of the innocent against violence and fraud, their supreme law. Before I submit these facts for your consideration, I desire, partly for the information of some who hear me, and partly for the sake of those who may hereafter have occasion to refer to this paper, to indicate both the qualifications which I possess for the treatment of this grave subject, and the preconceived opinions which might bias me in the choice and treatment of my facts. One of the *qualifications* to which I may be allowed to lay claim I share with other members of my profession; a second I hold in common with all teachers of medical jurisprudence; a third consists in the special information which nearly seven

years of office as medical superintendent of a convict prison, with a daily attendance subject to few interruptions, could not fail to have afforded me. My *preconceived opinions* may be summed up in few words:—I have always felt more sympathy with the victims, than with the perpetrators, of crime; I do not shrink from the thought of the pain inflicted by corporal punishment when it falls on cruel and brutal offenders against the law, or on those who add serious breaches of prison discipline to the crimes which led to their incarceration; nor have I found any reason to prefer any other punishment for murder to death upon the scaffold. Let me add that I have always felt it a relief when I could succeed in tracing some act of revolting cruelty to madness, rather than to the corruption of human nature; and that I have always had more love of truth, in science, in morals, and in government, than fear of the consequences to which its application might threaten to lead us. I state these, my preconceptions, not as subjects for discussion, much less as provocatives to those excellent persons from whom I differ in opinion, but as facts to be borne in mind at each step of this inquiry: by me, as a caution, lest I should be tempted to leave the straight and narrow path of scientific indifference; by you, that you may scrutinise every fact and inference with jealous watchfulness. The grave importance of my inquiry will I hope justify this reference to my personal views.

My subject, as the title of the paper indicates, must be arranged under two heads: I. *Insanity and Crime*, and II. *The Plea of Insanity in Criminal Cases*.

I.—*Insanity and Crime.*

The questions which offer themselves for solution under this head are three in number:—*a.* What is the ratio of insane to sane criminals? *b.* Is this ratio higher than among the rest of the community, and if so, to what extent? *c.* What are the crimes to which insane criminals are especially addicted?

a. The Ratio of Insane to Sane Criminals.—The numerical returns to which we should naturally first look for information on this point, are the successive volumes of “Judicial Statistics.” These supply us with the number of criminals tried for the several crimes and classes of crime, as well as the number of insane belonging to the several groups of criminals, under the two heads, of those “acquitted as insane,” and those “found or declared insane.”

Now, on comparing the whole number brought to trial for all offences in the thirty years 1836-65, with the number of insane comprised under these two heads, we get the low ratio of little more than 1 per 1,000: that is to say, of 1 per 1,000 for males and females of all ages, tried for acts of every degree of criminality, and

being under observation before and at their trial, and for some time afterwards.

But if we separate the less serious offences, which yield only the low ratio of 6 in *ten thousand*, and bring together the more serious ones, we obtain the much higher ratio of $5\frac{1}{2}$ per *thousand*; and if from these more serious offences we set apart the most serious of all, murder, our ratio of insane to sane criminals rises to $14\frac{1}{2}$ per *hundred*, or more than 1 in 7. This high ratio of 1 in 7 exhibits the extreme result which we are likely to attain in the case of any one class of criminals; for in this case the strongest motive exists, in the death-punishment, to establish the fact of insanity at the trial; while, after it, the mind, acted upon, in some cases, by remorse, and, in all cases, by the incidents of a trial recently undergone and imprisonment just commenced, would be likely to display itself in its true colours to the experienced persons in charge of this class of prisoners.

As I may have occasion to refer to these facts again, and to some of their details which I have not yet alluded to, I present the figures for the several classes of crime in a form easy of reference. The table relates to the thirty years 1836-65.

TABLE I.—*Ratios of Insane to Sane Criminals* ("Judicial Statistics").

Crime.	Tried.	Insane.	Ratio per 100,000.
1. Murder	1,811	263	14,520
2. Attempts to murder, maim, &c., &c.	7,220	157	2,175
3. Assaults	20,725	31	150
4. Offences against property with violence ...	53,427	30	56
5. " without violence	516,226	309	59
6. Malicious offences against property } (49 in 54 arson)..... }	5,684	54	950
7. Forgery, &c.	9,412	7	74
8. Other offences	22,796	13	57
Total	637,301	864	136

In order to complete the instruction which these returns afford, I present, in a second table, for the same numbers of offences tried, the numbers and ratios of persons acquitted as insane, and of those subsequently found or declared insane.

TABLE II.—*Ratio of Insane to Sane Criminals (distinguishing those Acquitted as Insane from those Found or Declared Insane).*

Crime.	Ratios per 100,000.		
	Acquitted as Insane.	Found or Declared Insane.	The same per Cent.
Murder	9,829	4,693	68 32
Attempts to murder, maim, &c.	1,233	942	57 43
Assaults	121	29	81 19
Offences against property with violence	19	21	48 52
without violence....	25	34	43 57
Malicious offences against property.....	581	369	61 39
Forgery, &c.	21	53	28 72
Other offences	26	31	46 54

The only observation which it occurs to me to make upon this table is, that the acquittals on the ground of insanity are, as a rule, proportionably more numerous as the crimes are more serious; a result doubtless compounded of the actual state of the culprit's mind and of the strength of the motive offered at the trial to establish his insanity. The crimes which exhibit the greatest proportional numbers of acquittals are:—

Assaults; murder; malicious offences against property; and attempts to murder, maim, &c.

Those that show the least proportional numbers are:—

Forgery, &c.; offences against property without violence; miscellaneous offences; and offences against property with violence.

It will be observed that both groups are arranged in order: the first beginning with the highest; the second with the lowest.

But these figures from the "Criminal Statistics" are obviously very far from presenting a true picture of the prevalence of insanity among criminals. For, on the one hand, it is only in the case of crimes which entail the punishment of death, or the very longest terms of imprisonment, that the plea of insanity is likely to be set up; and, on the other, criminals sentenced to shorter terms of imprisonment, looking forward to a speedy release, will so far control themselves as to avoid acts that might raise a suspicion of their unsoundness.

If, then, we would ascertain the true relation of insanity to crime, we must make use of such numerical returns as relate to the class of criminals to be found in our convict prisons. In their case, what with the remote prospect of release, and the prolonged opportunity afforded for observation, there is every reason why

insanity should display itself and be recognised; and if to the cases so recognised we add those in which an acquittal has taken place on the ground of insanity, we shall learn, what we are most interested in knowing, the ratio of insane to sane among the worst class of criminals.

Now, it happened fortunately for my present purpose that, in the year 1862, I obtained permission from the late Sir Joshua Jebb to procure a complete *census* of the criminals occupying the several convict prisons on the 31st March of that year. The information thus obtained related to the sex and ages of the convicts; to the fitness or unfitness of the men for labour; to the mental and bodily condition of men and women; and to the crimes for which they were undergoing punishment. In a paper which I read at a meeting of the Social Science Association held in London in that year, I was able to avail myself of the favourable opportunity thus afforded me, and to place on record the ages of the convict population, male and female; their state of mind and body; the crimes with which these states had become associated; the mortality to which they were subject from pulmonary consumption, and from all causes; and the relation of that mortality to the deaths occurring from the same causes in England, in London, and in the parts of London most likely to be inhabited by the destitute and criminal classes.

I now proceed to make use of the figures of this census, as the basis of a further inquiry into the relation of insanity and crime.*

On the day of the census (31st March, 1862), there were in all the convict prisons 5,952 male, and 1,218 female, prisoners; out of which numbers 243 men and 29 women were returned as of weak mind, insane, or epileptic. Now, if we count all these persons as of unsound mind, we obtain a ratio of 40·8 per 1,000 for men, 23·8 for women, and 37·9 for men and women together; or, in round numbers, 41, 24, and 38 per thousand for the three respectively.

But to these figures it is necessary to make certain additions; for the whole body of prisoners in the convict establishments on the 31st March, 1862, must be considered as the residue of criminals brought to trial during some years preceding, of whom a certain number had been acquitted on the ground of insanity, and a still larger number had been found insane by the medical officers of the several prisons, and sent to lunatic asylums.

A calculation based on the ratio borne by acquittals on the ground of insanity to convictions, as set forth in the "Judicial

* "On some Results of a Recent Census of the Population of the Convict Prisons in England; and especially on the Rate of Mortality at Present Prevailing among Convicts." By W. A. Guy, M.B., Medical Superintendent of Millbank Prison. "Transactions of the National Association for the Promotion of Social Science, 1862."

“Statistics,” shows that the addition required to be made under this head is not large. It does not exceed 16 in the case of male, and 8 in the case of female, convicts.*

After these additions, the numbers of insane and of sane prisoners of either sex will stand as follows:—

TABLE III.

	Males.		Females.		Males and Females.	
	Insane.	Sane.	Insane.	Sane.	Insane.	Sane.
By the census	243	5,709	29	1,189	272	6,898
Add acquittals on the } ground of insanity	16	—	8	—	24	—
	259	5,709	37	1,189	296	6,898

The addition which ought to be made to the foregoing figures, in consequence of certificates of lunacy, and consequent removal to asylums, of such convicts as supplied the residues of 5,952 males, and 1,218 females found in prison on the 31st March, 1862, cannot be calculated with precision: it can only be roughly estimated. I

* The elements of the calculation referred to in the text are contained in the following tables:—

1. *Convicts, 31st March, 1862.*

	Males.	Females.	Males and Females.
Crimes attended with violence.....	1,761	122	1,883
„ not attended with violence	4,056	1,082	5,138
Arson	135	14	149
	5,952	1,218	7,170

2. *Acquitted as Insane and Convicted in the Thirty Years 1836-65.*

	Acquitted as Insane.	Convicted.
Crimes attended with violence	303	64,691
„ not attended with violence	140	442,197
Arson	33	3,330

Assuming the acquittals on the ground of insanity in the three classes of Table I to have borne the same proportion to the numbers convicted and sent to the convict prisons as the acquittals and convictions respectively bear to each other in Table II, a simple series of calculations gives us the round number 24, to be divided among the two sexes in the proportion of 16 and 8 (40·8 and 23·8 approximating to the ratio of 2 to 1).

am much assisted in making this rough estimate by a published memorandum of the late Sir Joshua Jebb,* from which it appears that in the year 1860 (two years prior to the census) the whole convict male population, or (to speak more exactly) a number equivalent to the whole, was renewed at the rate of 36 per cent. per annum, and a number equivalent to the whole female convict population at the quicker rate of 45 per cent. per annum. Of the males, 296 were transported to Western Australia; and there were discharged, on expiration of sentence and on ticket of leave respectively, 1,588 and 677 males, and 246 and 167 females. It further appears from this memorandum that, in 1859, the number of male convicts sent to Western Australia, Bermuda, and Gibraltar amounted to no less than 644, that number being itself much less than in the years preceding.† Seeing, then, that only two years prior to the taking of the census the male convict population was being renewed in somewhat less than three years, and the female population in little more than two, we shall make a very liberal addition to the figures just stated, if we place to the credit of the criminal residue of 31st March, 1862, all the removals to lunatic asylums in the three years preceding. Now, I have ascertained that the numbers for these three years amounted to 100; and that of this number 11 were women and 89 men. On adding these figures to those of Table III, we obtain the following results:—

* “Memorandum on Different Questions Relative to the Management and “Disposal of Convicts, &c., &c.” By Sir Joshua Jebb, K.C.B., &c., &c., Chairman of the Directors, 1861.

† The following is a condensed statement of the figures relating to this year 1860:—

	Males.	Females.
In convict prisons, 1st January, 1860....	6,934	1,188
Received during the year	2,504	531
	9,438	1,719
Disposed of during the year.....	2,731	436
Remaining, 31st December, 1860.....	6,707	1,283
Removed to lunatic asylums.....	41	2
Pardoned on medical grounds	26	—
Deaths.....	83	19
Sentence expired	1,588	246
Released under an order of licence.....	677	167
Sent to Western Australia	296	—
Other causes of removal (escapes, &c.) .	20	2
Remaining, 31st December, 1860.....	6,707	1,283
Total	9,438	1,719

TABLE IV.

	Males.		Females.		Males and Females.	
	Insane.	Sane.	Insane.	Sane.	Insane.	Sane.
By the census, and by acquittals } on the ground of insanity	259	5,709	37	1,189	296	6,898
Add insane certified in the three } years 1859-61	89	—	11	—	100	—
Total	348	5,709	48	1,189	396	6,898

By these additions to the figures of the census, the ratio of insane male convicts is raised from 41 to 61 per 1,000; of insane female convicts from 24 to 40 per 1,000; and of the two sexes taken together to 57 per 1,000; and these figures may be taken to represent the extreme ratio of insane to sane among the worst class of English criminals. I believe that they are greatly in excess of the truth; but I am unable to say by how much they go beyond it.

b. Insanity among Criminals compared with Insanity among other Classes of Society.—As we possess some data by which to estimate the ratio of sane to insane persons in the general population, and also among the class of paupers, I shall treat this division of my subject under the two heads thus suggested.

The ratio of insane to sane among the population of England may be ascertained with some approach to accuracy by combining the data furnished by the Commissioners in Lunacy, the Poor Law Board, and the census of convict prisons.* In order to make this estimate as complete as our necessary ignorance of the number of insane persons among the general population who are not brought under the cognizance of any public body will allow, we ought to add an unascertained number of insane criminals at all times to be found in the county and borough gaols. Now, if we take the ascertained population of these gaols in 1861 as our guide, we may estimate their inmates at this date at 20,000, which number at the low rate of 1 per cent. will yield 200 insane persons to be added to the general muster-roll of the same class in England. The number of insane persons in England and Wales for 1867 may therefore be stated approximatively as follows:—

* 1. "Twenty-second Report of the Commissioners in Lunacy for 1867," published June, 1868; 2. "Twentieth Annual Report of the Poor Law Board, 1867-68;" 3. "Census of the Population of the Convict Prisons in England," previously cited.

TABLE V.

Insane other than paupers.....	5,919
("Report of Commissioners in Lunacy, Summary," p. 106)	
Insane paupers (lunatics and idiots)	41,276
("Report of the Poor Law Board," p. 12)	
Weak-minded, insane, and epileptic	272
(As in the "Census of Convict Prisons," 1862)	
Add for county and borough gaols	200
Total	<u>47,667*</u>

This total of 47,667 represents, be it understood, the aggregate of lunatics and idiots; and as, among the insane pauper population which forms so large a proportion of the whole, the insane who are designated as "lunatics" constitute, as nearly as possible, three-fourths of the whole, $\frac{3}{4} \times 47,667 = 35,758$, or a number nearly approaching to it, may be taken as the figure to compare with the census of convicts. Now, as the estimated population of England and Wales for the year 1867 amounted to 21,429,508, the number of insane distinguished as "lunatics" will be 1·67 per 1,000 of the population; and if the lunatics in the whole population admitted of comparison with the insane among the convicts, we should have the ratio of insane to sane criminals (57 per 1,000) thirty-four times as great as the ratio of lunatics to the whole population of England: or, if we take half the population to represent the adults which supply the convict prisons, we shall still have the criminal lunatics in excess in the high proportion of 17 to 1. But, in truth, the convict population does not admit of being thus compared with the general population; for the mass of insane convicts consists of imbeciles retained in confinement till the expiration of their sentences, and admits of no comparison with the lunatics of the general population, consisting, as it does, of the slow accumulation of men and women, the survivors of those who, for years previously, had been discharged cured or had died early. All then that can be safely said on this head is, that the disproportion between the ratio of insane to sane convicts and the ratio of lunatics to the population is so great as to justify the assertion, in general terms,

* This number falls far short of the true total of insane persons in England and Wales; for not only are there many lunatics among the wealthier classes who have not been brought under the notice of the Lunacy Commission, but the weak-minded, insane, and epileptic inmates of our prisons, who must exceed 250 in number, form, there is good reason to believe, only a small fraction (say 1 in 10) of the same classes roaming about the country under the slang names of *half-sharps* and *dozeys*, living by doles in the day time, using the casual wards of the union as sleeping places at their pleasure, and committing, or taking part in, the worst offences against the law.

that the criminal population is much more liable to insanity than the community at large.

If now we turn from the general population to the population of paupers, concerning whose liability to insanity we possess very accurate information, we shall probably obtain some instruction of the same general character, interesting, but necessarily inexact.

The pauper community, like a morass which holds the stagnant waters from running streams, is made up of the children of vice or misfortune; of able-bodied adults who cannot find work or will not exert themselves to obtain it; of all the sick from all classes of society who have failed, or refused to make, any provision for the future; and of aged persons, the worn out culprits of society mixed with a few victims of misfortune. This strange community naturally attracts to itself the idiot, the imbecile, and the lunatic; and becomes the temporary resort of all of these who are too poor to defray the charges of the private asylum. Among the class of paupers, then, we may expect to find insanity in all its forms at a maximum; and it cannot but prove instructive to compare this exceptional class with the convict population.

Now we learn that out of a population of 963,200 paupers in receipt of out-door and in-door relief on the 1st January, 1867, no less than 30,905 were lunatics, as distinguished from idiots (10,371 in number).^{*} This gives us the ratio of 32 per 1,000, or somewhat in excess of half the ratio (57 per 1,000) obtaining among the convict population. But on referring to the population returns for 1861,[†] it will be seen that of the in-door pauper population only one-fifth are of the ages (20—45) of the mass of the convict population. So that the ratio of the “lunatic” paupers to the pauper population of these ages will be found to rise to no less than 160 per 1,000, or nearly three times the ratio prevailing among our convicts. If, then, these figures were adopted as a rough approximation to the truth, it would follow that the convicts, though much more liable to insanity than the general population of which they form a part, are much less liable than the young and middle aged adults among the inmates of our workhouses.

c. *The Crimes of Insane Convicts.*—The returns from the convict prisons which furnished the materials for the census of 1862, put us in possession of facts relating to the ages of men and women, their mental and bodily condition, and the crimes for which they were undergoing punishment; also, in the case of male convicts, their fitness or unfitness for labour. It will be convenient to treat first of the men, and then of the women.

* “Twentieth Annual Report of the Poor Law Board,” p. 12.

† Table XXXVI, p. xcvi, of Summary Tables in vol. ii, showing the ages of male and female in-door paupers.

Male Convicts.—The 5,952 male convicts of March, 1862, consisted of 217 military offenders, and 5,735 civilians. The two classes are thrown together in the tables of the essay cited at p. 163, and in the earlier part of this paper. I shall now separate the military offenders as having been guilty of crimes not strictly comparable with those committed by the other convicts. But, in doing so, I shall take occasion to compare the bodily and mental condition of the two classes.

TABLE VI.

	Civilians.	Military.	Ditto per 1,000.	
			Civilians.	Military.
1. Weak-minded, insane, and epileptic	235	8	41	37
2. Subjects of scrofula and chronic disease	657	7	115	32
3. Subject to deformity or defect, } original or acquired	1,444	20	251	92
4. Not suffering from disease, infirmity, } or defect				
	3,399	182	593	839

The figures of this table are very instructive. They show that the process of recruiting which transforms the civilian into a soldier, while it eliminates a large proportion of the subjects of bodily disease and defect, does not shut out any appreciable proportion of those who suffer from disorders of the mind and nervous system: and this instructive fact will appear in a still clearer light if we resolve the figures of the first line of the table into their constituent parts, as is done in Table VII.

TABLE VII.

	Civil.	Military.	Ditto per 1,000.	
			Civil.	Military.
1. Weak-minded	160	6	28	28
2. Insane	14	1	2	5
3. Epileptic	61	1	16	5

Thus, then, it appears that the 217 military offenders and the 5,735 civilians contributed to the convict population of 1862 precisely the same proportion of men of weak mind. And we may infer from this that there are to be found among the population which supplies us both with criminals and soldiers about 28 in the thousand of men of weak mind not yet recognised as proper objects for the lunatic asylum. Some of these men, characterised in the picturesque language of the medicant-thief community as *half-sharps*, are, to my knowledge, very hard to understand. They are a puzzle

to doctors, magistrates, and recruiting officers alike:—plausible beggars, adroit thieves, extremely dangerous and costly members of the community. We shall know more about them and understand them better presently.

I now proceed to deal with the residue of male convicts which remains after excluding military offenders and others under punishment for offences which in 1862 I found it hard to classify, and which I then arranged in a class by themselves under the heading “other offences.” After deducting these two classes and four malingerers whose offences were not specified in the returns, I find that I have to deal with 5,598 male convicts, whose crimes I arrange under the following heads:—

TABLE VIII.

	Rape and other Offences contra Naturam.	Arson.	Cattle, Sheep, and Horse Stealing.	Burglary.	Homicide and other Crimes attended with Violence.	Fraudulent Offences.
Affections of the mind and nervous system }	18	13	9	35	29	125
Scrofula and chronic diseases of the heart and lungs }	12	13	12	125	54	419
Deformities and de- fects, congenital or acquired }	49	21	47	230	128	929
Not suffering from any disease or defect }	80	68	116	671	331	2,064
Ditto per 1,000 of each Class.						
	Rape and other Offences contra Naturam.	Arson.	Cattle, Sheep, and Horse Stealing.	Burglary.	Homicide and other Crimes attended with Violence.	Fraudulent Offences.
Affections of the mind and nervous system }	79	57	39	153	127	546
Scrofula and chronic diseases of the heart and lungs }	19	20	19	197	85	660
Deformities and de- fects, congenital or acquired }	35	15	33	164	90	663
Not suffering from any disease or defect }	24	20	35	201	100	620

In the following table I separate the first class into its three constituents—the weak-minded, insane, and epileptic; and I obtain the following figures:—

TABLE IX.

	Rape, &c.	Arson.	Cattle Stealing.	Burglary.	Homicide and other Crimes of Violence.	Fraudulent Offences.
Weak-minded	15	11	6	28	17	81
Insane	1	1	1	—	2	8
Epileptic	2	1	2	7	10	36

	Ditto per 1,000 of each Class.					
	Rape, &c.	Arson.	Cattle Stealing.	Burglary.	Homicide and other Crimes of Violence.	Fraudulent Offences.
Weak-minded	95	70	38	177	108	513
Insane	77	77	77	—	154	616
Epileptic	34	17	34	121	172	621

From the first of these two tables we learn that the men who suffer from diseases of the mind and nervous system are specially addicted to sexual offences, to arson, and to acts of violence other than burglary; also in a less marked degree to cattle stealing; while they take the lowest rank only in burglary and in fraudulent offences which may be presumed to require the maximum of forethought and contrivance.

The second table shows that it is to the weak-minded members of this mixed class that we are to attribute in a special manner the sexual offences, the fire-raisings, and the burglaries; to the epileptic the crimes of violence; to the insane the cattle stealings; to the insane and epileptic nearly equally the group of fraudulent offences.

I should attach more importance to these figures were it not for the smallness of the numbers in the case especially of the insane. But if, for the mixed class of weak-minded, insane, and epileptic of Table VIII we substitute the weak-minded of Table IX, and place each class of criminals in the order of the figures which represent their crimes, we obtain the following curious results:—

SEXUAL OFFENCES.

Weak-minded, 95; deformed, &c., 35; healthy, 24; scrofulous, &c., 19.

ARSON.

Weak-minded, 70; scrofulous, &c., and healthy, each 20; deformed, &c., 15.

CATTLE STEALING.

Weak-minded, 38; healthy, 35; deformed, &c., 33; scrofulous, &c., 19.

HOMICIDAL AND VIOLENT ACTS.

Weak-minded, 108; healthy, 100; deformed, &c., 90; scrofulous, &c., 85.

BURGLARY.

Healthy, 201; scrofulous, &c., 197; weak-minded, 177; deformed, &c., 164.

FRAUDULENT OFFENCES.

Deformed, &c., 663; scrofulous, &c., 660; healthy, 620; weak-minded, 513.

Hence it appears that in four out of six groups the weak-minded head the lists, and that they are addicted to sexual offences by comparison with the healthy in the ratio of 4 to 1; to arson in the ratio of $3\frac{1}{2}$ to 1; to cattle stealing in the ratio of 38 to 35; to acts of violence in the ratio of 108 to 100; while in the crime of burglary the weak-minded approach the healthy as 177 approximates to 201. I hazard the opinion, not without some authority from special cases which have come under my observation, that the criminal who is reputed sound in mind and body often associates the weak-minded with himself in the crimes of burglary and cattle stealing, and in such fraudulent offences as passing bad coin. It may be well, before I quit this first division of my subject, to place the facts contained in Table VIII in a more simple form by substituting for the four groups in that table the three groups of weak-minded, healthy, and diseased and deformed.

TABLE X.

	Rape, &c.	Arson.	Cattle Stealing.	Burglary.	Homicidal and Violent Acts.	Fraudulent Offences.
Weak-minded	15	11	6	28	17	81
Healthy	80	68	116	671	331	2,064
Diseased and deformed	61	34	59	355	182	1,348

	Ditto per 1,000 of each Class.					
	Rape, &c.	Arson.	Cattle Stealing.	Burglary.	Homicidal and Violent Acts.	Fraudulent Offences.
Weak-minded	95	70	38	177	108	513
Healthy	24	20	35	201	100	620
Diseased and deformed	27	17	26	181	87	662

Female Convicts.—To prepare the tables in the essay so often referred to for my present purpose, it is only necessary to deduct from the 1,218 female convicts the five whose crimes were not referred to any distinct class, one malingerer, one cattle stealer, and one convicted of aiding a rape. This deduction made, we have 1,210 female convicts to arrange in tabular form in accordance with their mental and bodily state and the crimes for which they were undergoing punishment in the year 1862.

The following table is the counterpart of Table VIII :—




TABLE XI.

	Arson.	Burglary.	Violent Offences.	Fraudulent Offences.
Affections of the mind and nervous system .	1	2	2	24
Scrofula and chronic diseases of the heart and lungs }	2	2	9	92
Deformities and defects, congenital or acquired }	2	2	13	145
Not suffering from any disease or defect	9	38	53	814

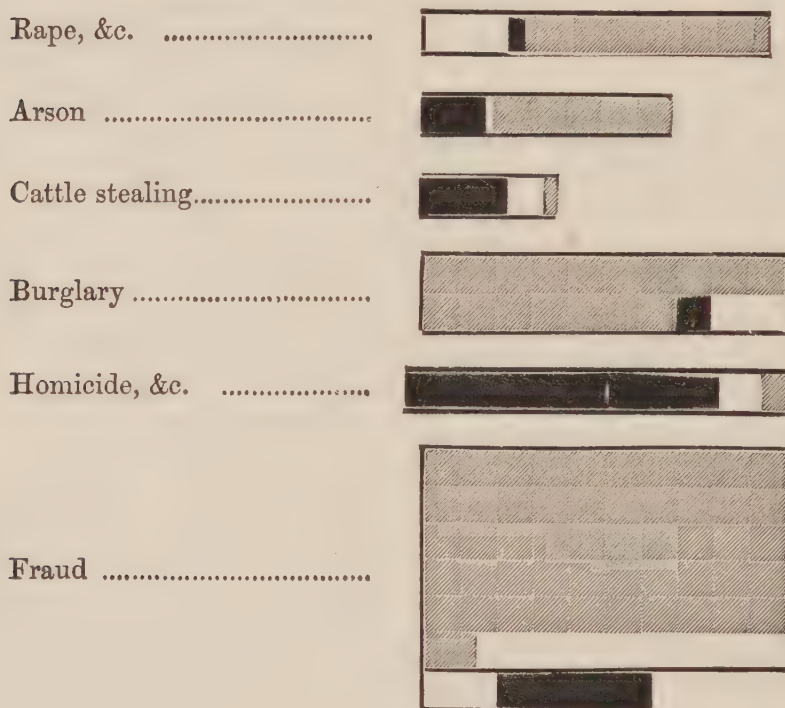
	Ditto per 1,000 of each Class.			
	Arson.	Burglary.	Violent Offences.	Fraudulent Offences.
Affections of the mind and nervous system .	34	69	69	828
Scrofula and chronic diseases of the heart and lungs }	19	19	86	876
Deformities and defects, congenital or acquired }	12	12	80	896
Not suffering from any disease or defect	10	42	58	890

It will be seen that between Table VIII and Table XI there are some coincidences and some divergences. The column which, in both tables, marks the crime of arson, exhibits the convicts mentally affected as specially addicted to this dangerous and destructive practice. Again, Table XI shows the class of fraudulent offences in exactly the same order as Table VIII, and the female convicts mentally affected, like men of the same class, to be least addicted to fraudulent offences. On the other hand, women of this class are found to stand at the head of the column which comprises burglars and housebreakers, probably because, as housekeepers, they become associated with burglars of the other sex. Lastly, Table XI shows the females subject to bodily disease to be most addicted to crimes of violence, in lieu of the mentally affected who head the corresponding column in Table VIII. To this class of crimes the healthy women are least addicted, and the diseased and deformed among them, most.

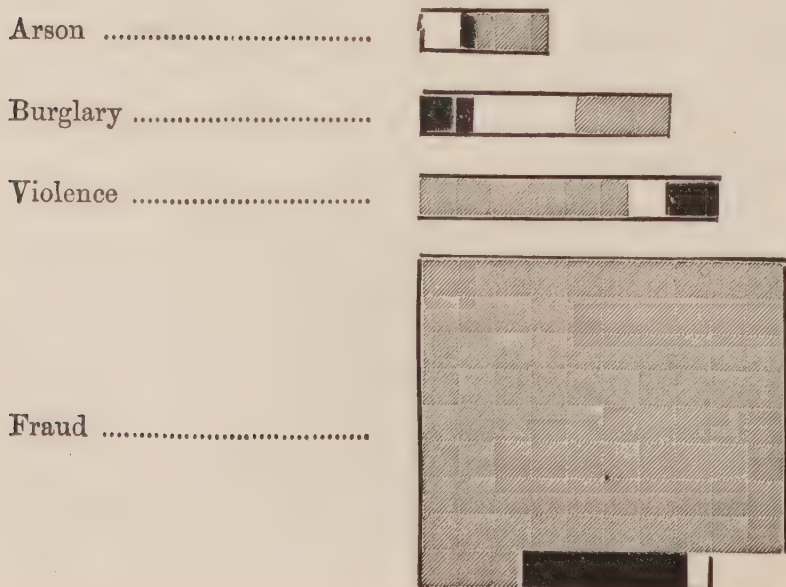
As the number of women subject to affections of the mind and nervous system is very small, I shall not enter into any further analysis of the crimes of female convicts. Of the two sexes, compared with each other, it may suffice to state that fraudulent offences are in excess among women as compared with the same class among men, in about the proportion of 3 to 2 ; that the ratio is inverted in the case of the crime of arson ; while crimes attended with violence (not comprising burglary) count as 10 to 7 in the case of men and women.

The crimes of healthy, diseased, and weak-minded convicts, male and female, are shown in the following plan, in which the unshaded parts  relate to the healthy, the dark parts  to the diseased and deformed, and the shaded parts  to the weak-minded: and, if we take the diagram relating to fraud among males as an illustration, the shaded part represents the fraudulent offences committed by the weak-minded out of 1,000 crimes of all kinds; this, added to the unshaded spaces, shows the same offences as committed by the healthy; and the entire block (shaded light and dark), the frauds committed by the diseased and deformed.

Male Convicts (1,000).



Female Convicts (1,000).



Before I proceed to the second division of my subject—The Plea of Insanity in Criminal Cases—I shall offer a brief summary of the results to which the inquiries of this first part appear to have led.

1. That *the ratio of insane to sane criminals*, when estimated by the number acquitted on the ground of insanity or found or declared insane soon after trial, ranges from 56 to 14,520 per 100,000; the high proportion of $14\frac{1}{2}$ per cent. being attained in trials for murder.

2. That the higher ratios obtain in the case of murder; attempts to murder and maim; arson, and other malicious offences against property; and assaults: these offences being placed in the order of the liability to insanity. On the other hand, the crimes which show the lowest ratio (these too being placed in the same order) are forgery, &c.; offences against property without violence; and offences against property with violence.

3. That among those acquitted on the ground of insanity, the higher ratios prevail in the case of assaults; murder; arson and malicious offences against property; and attempts to murder, maim, &c.: these also in the order of their frequency.

4. That according to a very liberal estimate, based on a census of convict prisons taken in 1862, the ratio of insane to sane probably does not exceed 61 per 1,000 in the case of male convicts; 40 per 1,000 in the case of female convicts; and 57 per 1,000 for the two sexes taken together: or approximatively, 6, 4, and 6 per cent.

5. That the ratio of insane to sane convicts is so large as compared with the ratio of insane to sane among the general population as to justify the statement that the criminal population contains a much larger proportion of insane members than the community at large.

6. That convicts, though much more liable to insanity than the general population of which they form a part, are much less liable to it than the young and middle-aged adults among the inmates of our workhouses.

7. That the ratio of weak-minded to other convicts is exactly the same in the case of soldiers and civilians.

8. That among male convicts the weak-minded are found specially addicted to sexual offences, and arson; and, in a less degree, to cattle stealing, and offences attended by violence.

9. That, among female convicts, the insane are also specially addicted to arson.

10. That the weak-minded and insane, both among male and female convicts, are less given to crimes marked by fraud.

11. That, on comparing men with women, women are found to

be addicted to fraudulent offences in the proportion of 3 to 2; while men are more given to arson in the ratio also of 3 to 2, and to crimes attended with violence in the proportion of 10 to 7.

II.—*On the Plea of Insanity in Criminal Cases.*

Under this head, I shall examine the question, whether the admission of the plea of insanity in criminal cases encourages crime. The facts which I shall make use of for this purpose are taken from the summary table to be found in the "Judicial Statistics" in the successive volumes from the year 1836 to the year 1867 inclusive, in the two columns of that table headed respectively "Acquitted as Insane," and "Found or Declared Insane;" that is to say, acquitted at the trial, or soon after it. I shall begin by presenting these facts for the thirty-two years comprised in the reports, in a tabular form, in which I shall show first, for each year, the sum of the two classes found insane at or after the trial; then these figures reduced to the uniform standard of 20,000,000, being an approximation to the population of England and Wales out of which these insane criminals have come; and lastly these figures, thus corrected, grouped in periods of two, four, eight, sixteen, and three years respectively. The table, which consists wholly of round numbers, is the first (A) of the Appendix.

Now there is one fact which is patent on the face of this table, whether we examine the first column of the figures, as given in the "Judicial Statistics;" or the second column, which shows the ratio per twenty million of inhabitants; or the subsequent columns, which exhibit these ratios in different groups of years:—the first figure in every column is larger than the last; in other words, there were more persons found insane at or after trial in 1836 than in 1867, in 1836-37 than in 1866-67, in the four years 1836-39 than in the four years 1864-67, in the eight years at the beginning of the series than in the eight years at the end of it; and, again, in every group of three years at the head of the table as compared with the corresponding group at the tail of it. To show the degree of difference, it will suffice to point out that the corrected figures for 1836 are exactly double the corresponding figures for 1867. Another fact which reveals itself with equal clearness on the very face of the table, is the fluctuating character of its figures, and the absence of any long series of increase or decrease. Thus, in the first column, we have such figures for two successive years as 40 and 26, 38 and 22; and, in the second column, 42 and 30, 47 and 30, 24 and 37; but we cannot pick out from the first four columns any instance of a continuous increase or decrease extending beyond four years, or four periods of years. But the most remarkable feature in this table is the progressive decrease of the last figures, rendered very distinct

when the years are thrown into groups of two or more years. In the column of two years the number of insane falls, with fluctuations, from 77 in 1854-55 to 43 in 1866-67; and in the column of four years, without fluctuation, from 150 in 1852-55 to 99 in 1864-67. In the column of eight years there is a fall from 292 to 216. If, then, the remarkable fluctuations in the figures of the table, the shortness of the periods of increase or decrease, and the falling off of the numbers in later years, as shown by every column of the table, were taken (as it is not unreasonable that they should be) as good reasons for thinking that crime has not been encouraged by the admission of the plea of insanity in criminal cases, the experienced worker with figures would feel that he ought not to rest satisfied with this inference, however plausible it may appear at first sight. The fluctuations, and the short periods of increase or decrease—may they not possibly be traced to causes acting at short intervals? and the falling off in numbers which marks the last third of the table—may it not be due to some cause wholly unconnected with the plea of insanity? and may not that be found to be some new state of things coming into play at or about the two years 1854-55, or in the very year 1855? Let us first see what light is thrown on this question if we divide the whole body of crimes into two groups, the first consisting of crimes characterised by passion, violence, and malice, the second by fraud: placing in the first class murder and murderous attempts, manslaughter, assaults, sexual offences, burglary, and arson, with a few others; in the second, larceny, forgery, receiving stolen goods, and several similar offences. These two classes form the staple of Table B of the Appendix, in which also the figures have been reduced to a uniform standard of twenty millions.

Now, while the first column of this table, which records the facts relating to crimes of passion, violence, and malice, displays, on a cursory examination, no remarkable falling off in the figures, the second column, which relates to fraudulent offences, shows, for the year 1856, a sudden decline from 15 to 4, followed by low figures subject to considerable fluctuations. The cause of this sudden fall and continuous decline is found in the operation of the Criminal Justice Act (18 and 19 Vict., cap. cxxvi), which empowered justices of the peace at petty sessions, and metropolitan police magistrates, to deal summarily with cases of simple larceny where the value of the property stolen does not exceed 5s., and with cases where the value exceeds that amount, the accused pleading guilty. This Act of Parliament came into full operation in the year 1856 (it bears date 14th August, 1855); and it was in that year that the fall from 15 to 4 took place. That it was competent to bring about this considerable reduction may be inferred from the fact that the

total commitments, or cases brought under the jurisdiction of the criminal courts, fell from 29,359 (the number in 1854) to 25,972 in 1855, to 19,437 in 1856, and to 17,855 in 1858, 1857 having been marked by a slight increase of 832 over the year preceding. The reduction from 1854 to 1858 amounted to no less than 11,504 out of 29,359.

The bearing of this act of parliament on the number of persons found insane must have been considerable; for it had the effect of sending straight to prison more than a third of those persons who had previously been detained for trial by jury at sessions or assizes, under circumstances favourable to the outbreak or detection of insanity; and it is worthy of remark that the reduction of cases of insanity among the class of fraudulent offenders from 46 in the three years prior to 1855, to 15 in the three years subsequent to it, is a very close fractional approximation to the total reduction in the number of committals (from 25,972 to 17,855, or 8,117) in the years 1855-58. In both cases the fractional reduction was somewhat less than one-third.

We have thus made a forward step in our inquiry; and may for the present dismiss the class of fraudulent offences with the remark that while, as a general rule, and taking one year with another, the smaller class of offences marked by passion, violence and malice, yields a larger number of cases of insanity, the far larger class of fraudulent offences furnishes fewer such cases; but that both classes exhibit the same kind of fluctuations from year to year, as is very clearly seen when the figures of the table are thrown into the form of curves. The lines of the two curves for the first twenty years are seen to intermix and touch each other; whereas, after 1855, they separate widely. The column of crimes of violence exhibits every degree of annual fluctuation between the numbers 27 and 12; the column of fraudulent offences like fluctuations between 22 and 8.

In this close resemblance between the figures of the first two columns of the table during the space of twenty years, I recognise a forcible argument in favour of the safety to the public of entertaining the plea of insanity: for among the cases represented in the first column are to be found all those acquittals on the ground of insanity which most excited the public mind, and gave rise to the most serious misgivings; while the second column consists wholly of cases in which the public had no cognizance whatever of the fact of insanity having been made the subject of inquiry. In other words, the complete publicity attending the acquittal of such men as McNaughten and Dadd, and such women as Martha Brixey; the escape from the gallows of Oxford and Francis, and from the lash of Lieutenant Pate, seems to have left no mark on the column which

registers their cases that is not equally impressed on the column that records the madness of the unnoticed petty thief, or practitioner of the many forms of fraud.

Let us now see whether this fair inference from the figures of this table is, or is not, borne out by a critical study and examination of the elements of which the first column consists. The crimes comprised in this column are :—1. Murder, attempts to kill and injure, manslaughter, and assaults. 2. Sexual offences, including rape, and offences *contra naturam*. 3. Burglary and housebreaking ; and, 4. Arson and a small number of other malicious offences. In Table C of the Appendix, the numbers of the insane who have committed these several crimes are given, first for each year of the series of thirty-two years from 1836 to 1867, and then for groups of three years beginning, in one series, with 1836, in the other with 1838, so as to present two distinct sets of figures, and thus avoid any imputation of unfairness in preparing the table for examination and analysis. In consequence of the smallness of the figures in some of the columns, I have not reduced them to a uniform standard of population.

I shall presently make this correction in respect of the groups of three years ; but will first observe of the table as it stands, that it shows the same remarkable fluctuations from year to year as the earlier tables did : in the first column such successive figures as 8 and 18, 12 and 28, 19 and 10, 18 and 8 ; in the second column, such as 1 and 6 ; in the third, 4 one year, and 0 the next, with no case in four successive years ; and in the fourth and fifth columns, a like state of things. But when we examine the triads of years, we observe a tendency to increase, which will be more readily estimated if we arrange them in double horizontal columns, contrasting the first with the last, the second with the last but one, and so on ; the exceptions to the rule of increase being indicated by the sign (<) for decrease, and (=) for equality.

TABLE XII.

	Triads of Years, beginning with 1836.					Triads of Years, beginning with 1838.				
Murder, &c.	{ 41	28	42	47	46<	30	36	44<	47	41
	{ 59	50	59	54	39<	46	68	36<	68	47
The other crimes....	{ 15<	9	9	10	5	10<	8	11	6	8
	{ 9<	14	15	16	10	8<	11	15	15	16
Sexual offences	{ 6<	4<	3	1	1	3	5<	2	0	4<
	{ 3<	3<	4	3	4	3=	3<	3	5	3<
Burglary, &c.	{ 4<	3	1	3	2<	4<	1	1	4	1
	{ 2<	3=	3	4	1<	0<	3	3	4=	2
Arson, &c.	{ 5	2	5	6	2	3	2	8	2	3
	{ 4<	8	8	9	5	5	5	9	6	11

The rule then (except in the cases of sexual offences and burglary, taken by themselves), is one of increase, but increase consistent with marked fluctuations from one triad to another.

But if we were to assume that this tendency to increase was due to the admission of the plea of insanity, and the encouragement to crime thence arising, we should have to admit that greater disparity shows itself in respect of the crime of arson, in which the fact of insanity being found at or after trial excites little public interest, than in respect of murder and the crimes allied to it, which, when the plea of insanity is set up, attract to themselves extreme publicity, and give rise to lively controversy. Nor ought we to overlook the fact that the figures in all the columns of Table XIV exhibit fluctuations scarcely consistent with the notion of encouragement acting either continuously, or renewed at short intervals, by cases provoking more or less discussion at every fresh session or assize.

I now proceed to display the facts relating to the crime of murder, and the plea of insanity, as set up at and after trial; and I will mark the years in which the cases that have most attracted public attention have occurred. This is done in Table D of the Appendix.

The figures in all the columns of this table show the same fluctuations, and the same tendency to increase, as was seen in former tables. By gathering together the groups of three years into larger groups of six and twelve, and making use of the corrected figures, we arrive at the numbers shown in the following table:—

TABLE XIII.

From 1836.										From 1838.									
33	14	17	32	38	28	30	38	30	22	19	20	24	36	32	31	37	21	38	25
47		49		66		68		52		39		60		63		58		63	
96				120						99				121					

The tendency to increase is sufficiently shown by the figures of this table. The assumed population of twenty millions yields an increasing number of insane murderers, the increase, when one group of twelve years is compared with another, amounting to about one-fifth. But that this increase is not dependent on encouragement afforded by the acquittal of insane homicides, is apparent on the very face of the table, in which I have placed opposite the years, 1843, 1845, 1855, and 1863, the names of McNaughten, Brixey, Buranelli, and Townley, as notorious cases that gave rise,

when they occurred, to an amount of controversy which must have carried the fact of their acquittal or condemnation into every household in which public affairs are heard or talked of.

Now those who think that to entertain the plea of insanity is to encourage the crime of murder, must suppose the encouragement to take effect on persons either of sound or of unsound mind: if of sound mind, it will show itself by the figures which record the trials for murder; if of unsound mind, by those which record the numbers found insane at or after trial. An increase in the figures for the year following some famous trial, would be evidence of encouragement; a decrease would indicate discouragement.

I will, therefore, present, in a tabular form, the figures for the year preceding the trials, those for the year of the trials (distinguished by *italic type*), and those for the three years following them. For the sake of brevity, I shall indicate the trials for murder (which will comprise both sane and insane criminals) by the letter A; those tried for murder, and acquitted on the ground of insanity, or found insane soon after their trial, by the letter B; and those tried for murder, and murderous assaults, &c., and found insane, by the letter C.

TABLE XVIII.

McNaughten, acquitted, March, 1843.....	A	67	85	75	65	68
	B	4	7	3	9	8
	C	15	23	19	17	26
Townley, sentence commuted, December, 1863	A	77	83	70	60	55
	B	17	13	9	11	8
	C	30	27	19	20	18
Buranelli, executed, April, 1855	A	62	57	82	70	66
	B	14	7	7	14	15
	C	26	21	29	30	29
Martha Brixey, acquitted, June, 1845.....	A	75	65	68	72	76
	B	3	9	8	10	5
	C	23	19	17	26	13

These figures, it will be seen, give no sort of support to the popular opinion that acquittals or commutations of the sentence of death on the ground of insanity afford encouragement to homicidal acts in the persons of the sane or the insane, while, on the contrary, sentence of death carried into effect would appear to act as a discouragement. Thus every figure in the cases of McNaughten and Townley, who were not hanged, speaks the language of discouragement, and two out of three in the case of Buranelli, who was executed, the language of encouragement, the third figure yielding an uncertain sound. Again, in the case of Martha Brixey, two figures out of three speak the language of discouragement, where

the opposite result would have been in accordance with the theory. Of the four cases there is not one that does not exhibit, for the year following the trial, figures in direct opposition to the popular theory respecting the victims of insanity; while in one only of the three (the case of Martha Brixey) is there any show of support to it as respects the whole body of criminals tried for murder and murderous assaults; and here the increase is only from 65 in the year of the trial, to 68 in the year following, with a slow increase in the two succeeding years.

As the four cases which I have just used as tests of the opinion that crime finds encouragement in the plea of insanity, were selected prior to any examination of the figures of Table D of the Appendix, I may fairly regard them as conclusive; for it is extremely improbable that by the selection and like treatment of cases which produced less public excitement, a contrary result would be arrived at.

At this point, then, I shall pause, and endeavour to express in few words the conclusions which this second part of my inquiry seems to warrant.

1. That the figures of the "Judicial Statistics," which show the numbers found insane among those brought to trial for all offences, would lead to a false inference that insanity had diminished among the population of criminals, if we did not take into account the operation of the Criminal Justice Act of 1855, which withdrew upwards of a third of our criminals from the sessions and assizes, and placed them under circumstances unfavourable to the development and recognition of insanity.

2. That after the separation of the large number of fraudulent offences affected by this Act of Parliament, the numbers found insane on or soon after trial for acts of violence, passion, and malice, show a tendency to increase at the slow rate of 3 cases in four years; but that this increase is subject to interruptions and fluctuations inconsistent with the idea of encouragement, either acting continuously or renewed year by year, by the events of the trials at sessions or assizes.

3. That the *interruptions* and *fluctuations* in question are quite as observable in the case of crimes which excite little public interest or discussion, as in the case of murders or murderous assaults.

4. That on testing the trials that have excited most public interest, and led to most discussion, by the figures which represent either insane homicides or sane murderers in the year or years immediately following, there are no signs of encouragement when the penalty of death is not inflicted, or of discouragement when it is.

5. That, on the contrary, the figures would seem to justify the inference that neither to the sane nor to the insane class among our criminals does the prospect of long imprisonment, or detention for life in a lunatic asylum, offer any attraction or temptation; while the punishment of death (perhaps only as formerly inflicted) seems as if it might have exercised a certain attraction or fascination.

But though, in the presence of such facts as those contained in Table XVIII, it is not possible to allege that the admission of the plea of insanity encourages crime, and this paper could scarcely be deemed incomplete if I were to stop at this point, I should be better satisfied if I could assign some reason or reasons for the fluctuations observable in the annual returns, and for the general tendency to increase which shows itself in them. Among the possible causes of *fluctuation*, I might mention political excitements (in the shape of elections, riots, and agitations) as creating, so to speak, an atmosphere favourable to the growth and development of insanity; wars, as removing to foreign parts men, at the criminal ages, who, had they remained at home, would have supplied a certain number of insane criminals; peace following war, and great exhibitions and concourses of people, as having the opposite effect; zymotic diseases as causes of nervous exhaustion and excitement; fluctuations in public opinion as influencing the minds of judges and juries, and the press.

Among the possible causes of a progressive increase in the number of insane criminals (such increase being itself interrupted by constant fluctuations), I would specify a steadily increasing knowledge among medical men of the signs and marks of mental unsoundness; an increasing activity on the part of those who are opposed to the punishment of death, in bringing cases under the notice of the Home Secretary; an ever-growing publicity given to crime by the public press; a greater and greater pressure put upon the energies of all the working members of society; an increase of efficiency in the police, both civil and rural. Of causes coming into operation at some particular point of the period under review, we have had a notable example in the Criminal Justice Act of 1855, at which period also the cheap newspaper press came into play; and the successive Acts of 1839, 1840, 1856, and 1859, establishing a rural police, or increasing its extent and efficiency, afford another illustration of the same class.

Though some of these causes of fluctuation and increase may be partially counteracted by influences acting in an opposite direction (as, perhaps, by education raising the imbecile above that point of ignorance and incapacity at which temptation is hardest to resist), still a balance of hostile agencies may be presumed to

exist, sufficient to account for the increase in the numbers of insane criminals.

If, now, we submit to a careful scrutiny Table D of the Appendix, which shows the numbers of insane homicides for every year from 1836 to 1867, and compare them with the leading political and other events which have excited and disturbed the public mind, and especially if we call to our aid the method of representation by curves, we shall see that the events in question do exercise a marked influence on the number of this class of offenders. I take the following cases as illustrations:—

1. In 1849, insane homicides rose from 5 in the previous year, to 16: and 1849 was a cholera year.

2. In 1854, another cholera year, there was a rise from 8 to 14.

3. In 1857, there was a rise from 7 to 14, and that was the year of the Indian Mutiny.

4. In 1862, the number rose from 8 to 17, and in that year the distress of the cotton famine coincided with the excitement of the International Exhibition.

5. In 1837, 1841, 1847, 1852, 1857, 1859, and 1865, there were parliamentary elections; and in five out of the seven years there was a greater or less increase in the number of insane homicides.

6. In the three years, ending 1862, there was a progressive rise from 5 to 17; and those years culminated in the cotton famine and the International Exhibition.

Lastly, the figures which record the fluctuations in acts of violence, passion, and malice, are found to reach their highest points in 1849, 1854, 1857, and 1862, years already pointed out as marked by incidents productive of public excitement and anxiety.

The general tendency to increase in the number of insane homicides (the last point demanding inquiry, as, possibly, indicating encouragement afforded by the admission of the plea of insanity in criminal cases) may be brought to the test of experiment, if we inquire what happens in the convict prisons, sealed, as they are, against all intelligence of trials that might excite the unsound minds existing among the prisoners.

Now, I am able to compare the number of convicts certified year by year in all the convict prisons during the seventeen years, 1851 to 1867, with the number of insane homicides in the same years. The result, which is very instructive, is shown in the table annexed; in which, as in many previous tables, two groupings of the facts are shown.

TABLE XIX.

	Homicides found Insane at or after Trial, per 20,000,000.		Convicts Certified as Insane, per 10,000.	
	1851 to 1866.	1852 to 1867.	1851 to 1866.	1852 to 1867.
1851....	6		25	
'52....	11	19	23	63
'53....	8	40	40	58
'54....	14	21	30	67
'55....	7	44	28	76
'56....	7	21	34	63
'57....	14	44	33	67
'58....	15	23	24	76
'59....	8		52	
'60....	5	13	50	80
'61....	8	43	30	94
'62....	17	30	36	99
'63....	13	78	58	85
'64....	9	20	75	
'65....	11	35	24	
'66....	8	15	37	
'67....	7	—	48	

It will be observed that, during these seventeen years (being more than half of the whole period under review) the number of insane homicides, not only did not increase, but slightly diminished, being 82 in the eight years 1851-57 and 79 in the eight years 1859-66; 84 in the eight years, 1852-59, and 78 in the eight years, 1860-67. And yet, during this same period, the convicts certified as insane, out of a number assumed to remain constant at 10,000, increased by more than 50 per cent. And even when allowance is made for the circumstance that a few of the men and women certified from the convict prisons were found insane soon after trial, the fact still stands out in strong relief, that among convicts shut out from contact with the outer world, and from the influence of example, and of the sentences passed at sessions and assize, the certified insane largely increase in number, while those found insane at or soon after trial show, for the same period, a slight falling off.

The figures of this table, therefore, may be taken to prove, not only that insanity may increase, or seem to increase, among criminals shut out from all intercourse with the world, and ignorant of the issue of the plea of insanity when set up on behalf of offenders against the law, but also that other causes may be in operation, much more influential than any encouragement that the verdicts of juries may be supposed to afford. Now the causes which might be alleged as bringing about this increase of certified convicts are, some difference in the treatment of convicts tending to harass and

excite their minds; some special degeneracy of mind and body affecting this class of men and women; or, what I myself believe to be much more probable, increasing knowledge on the part of the certifiers themselves of what constitutes insanity, and increased readiness on the part of the superintendent medical officers of lunatic asylums to acquiesce in the certificates presented to them, and so to admit as inmates those whom their predecessors, or they themselves, at an earlier period, would have rejected.

Of the force of these elements of medical opinion in determining the number of convicts certified as insane, there is an illustration in the second division of the table which, on many accounts, is well deserving of attention. It will be seen that, during the eight years 1851 to 1858 inclusive, the numbers certified as insane from all the convict prisons ranged between a minimum of 23 per annum and a maximum of 40; whereas, in 1859, the numbers rose from 24 to 52, stood at 50 during the year following; never again fell below 24, and rose in the year 1854 to the unprecedented number of 75! So that, if we compare the first eight years of the series with the last, we have the 264 certificates of the first swollen to 358! Now, it was in June 1859 (the year in which the large number of 52 for the first time occurs), that I succeeded my lamented friend and predecessor, Dr. Baly, in the office which he had held for nineteen years; and it was in the spring of 1864 that the imbeciles from Dartmoor and other convict prisons were first brought into wards prepared for them at Millbank, and so submitted, in common with all new comers, to a closer observation, backed by certain facilities for certifying lunatics which do not exist at the other convict establishments.

It is now time that I bring this communication to a close. In doing so, I wish to offer my acknowledgments to Mr. Gover, our Assistant Secretary, for the help he has given me in collecting materials, part only of which I have been able to bring into use this evening; and to my friend (his brother), the senior surgeon of the prison at Millbank, for some returns of which I stood in need. The work which we have done will not be wasted if it bear no other fruit than that gathered this evening. It is no small matter to have shown by facts not to be disputed that we have at this moment within the walls of Millbank upwards of 200 convicts* so unsound in mind as to be deemed fit occupants of special wards, and yet not deemed quite fit for the lunatic asylum—men peculiarly addicted to crimes of passion, violence, and malice; ready instruments of mischief in the hands of the most desperate criminals;

* From a return with which I have been favoured by Mr. Gover, I find that there are now in Millbank 140 weak-minded, 63 epileptics, and 25 cases not easily defined by a single word or phrase.

most dangerous, destructive, and expensive members of society ; the most obtrusive and deceptive of all our unreal signs and marks of over-population and an overstocked labour market (for hosts of these people, professing starvation and an inability to obtain work, keep continually moving from place to place, and so reproduce themselves before the eyes of a credulous public). It is something, too, to have proved—may I hope to the satisfaction of others as of myself?—that society needs no longer to look with suspicion and distrust on those who would give free scope to the admission of the plea of insanity in criminal cases. From these feelings, I trust that the truth, as I believe it to have been set forth in this paper, has for ever set us free.

The facts relating to our weak-minded criminals, as stated in the early part of this paper, seem to be specially worthy of attention. If carefully studied and taken to heart, as they ought to be, they would inevitably lead to great social and economical reforms.

If suitable provision were made for the imbecile members of the great mendicant-thief community by increasing the number and size of our lunatic asylums, the work of the poor law would be greatly simplified, and the cost of crime very largely diminished. Money enough might be saved in this way to defray the cost of a more efficient police both in town and country.

There is assuredly much in our present social condition that is eminently unreal. It is quite possible that the existence of a large body of imbeciles tramping from place to place may give rise, as has just been stated, to a deceptive appearance of over-population, to diseases of which they are the carriers, to crimes which, but for them, would exist to a very limited extent. The lunatic asylum is not only their proper place, but would be a truly economical substitute, in a large number of cases, for the workhouse, the hospital, and the prison.

. It will be seen that more than once in this paper, reference is made to illustrative curves. These were shown at the reading of the paper, but could not be conveniently inserted in the text. In the diagrams at p. 174, shaded blocks have been used instead of distinctive colours.

APPENDIX.

TABLE A.—*All Crimes.*

	Insane.	Insane per 20,000,000 of Population.	Ratio per 20,000,000, in Groups of				Three Years.
			Two Years.	Four Years.	Eight Years.	Sixteen Years.	
1836	31	42	76 } 72 }	148 }	279 }	571	118
'37	26	34					
'38	32	42					
'39	23	30	67 }	131 }	292 }	571	97
'40	25	32					
'41	28	35					
'42	23	29	64 }	131 }	292 }	571	109
'43	29	35					
'44	37	45					
'45	31	37	82 }	162 }	292 }	571	117
'46	28	33					
'47	40	47					
'48	26	30	80 }	130 }	292 }	571	106
'49	29	33					
'50	38	43					
'51	22	24	67 }	130 }	292 }	571	97
'52	30	33					
'53	36	40					
'54	38	41	73 }	150 }	283 }	499	110
'55	34	36					
'56	31	33					
'57	35	36	69 }	133 }	283 }	499	100
'58	33	34					
'59	29	30					
'60	24	24	64 }	117 }	216 }	499	85
'61	24	24					
'62	38	37					
'63	33	32	69 }	99 }	216 }	499	88
'64	27	26					
'65	31	30					
'66	23	22	56 }	99 }	216 }	499	88
'67	23	21					
Average	30	33	—	—	—	—	—

TABLE B.—*Crimes of Violence and Fraud Distinguished.*

	One Year.		Two Years.		Four Years.		Eight Years.		Sixteen Years.	
	Violence, &c.	Fraud.	Violence, &c.	Fraud.	Violence, &c.	Fraud.	Violence, &c.	Fraud.	Violence, &c.	Fraud.
1836	27	15								
'37	26	8	53	23	91	57	161	119	317	256
'38	21	21								
'39	17	13	38	34						
'40	14	18			70	62	156	137	356	143
'41	18	18	32	36						
'42	15	14								
'43	23	12	38	26	85	78	196	87	356	143
'44	23	22								
'45	19	18	42	40						
'46	17	17			71	59	160	56	356	143
'47	26	21	43	38						
'48	13	17								
'49	23	10	36	27	90	27	160	56	356	143
'50	23	20								
'51	12	12	35	32						
'52	19	14			89	61	196	87	356	143
'53	23	17	42	31						
'54	26	15								
'55	21	15	47	30	107	26	160	56	356	143
'56	29	4								
'57	30	6	59	10						
'58	29	5			70	29	160	56	356	143
'59	19	11	48	16						
'60	15	9								
'61	18	6	33	15	90	27	160	56	356	143
'62	30	7								
'63	27	5	57	12						
'64	19	7			70	29	160	56	356	143
'65	20	10	39	17						
'66	18	4								
'67	13	8	31	12						
Ave.	21	12	—	—	—	—	—	—	—	—

TABLE C.—*Crimes in Detail.*

[illegible]

TABLE D.—*Insane Homicides only.*

Year.	Cases.	Acquitted as Insane.	Found or Declared Insane.	Total.	Groups of Three Years.			
					Beginning		The same Corrected for Increase of Population.	
					1836.	1838.		
1836....	—	7	1	8				
'37....	—	5	3	8	25	—	33	—
'38....	—	7	2	9				
'39....	—	1	1	2	—	15	—	19
1840....	—	3	1	4	11	—	14	—
'41....	—	5	—	5				
'42....	—	3	1	4	—	16	—	20
'43 {	Daniel McNaughten, } acquitted.....	6	1	7	14	—	17	—
'44....	—	1	2	3				
'45 {	Martha Brixey, ac- } quitted.....	5	4	9	—	20	—	24
'46....	—	6	2	8	27	—	32	—
'47....	—	5	5	10				
'48....	—	5	—	5	—	31	—	36
'49....	—	12	4	16	33	—	38	—
1850....	—	5	7	12				
'51....	—	5	1	6	—	29	—	32
'52....	—	5	6	11	25	—	28	—
'53....	—	5	3	8				
'54....	—	11	3	14	—	29	—	31
'55 {	Luigi Buranelli, ex- } ecuted	4	3	7	28	—	30	—
'56....	—	4	3	7				
'57....	—	9	5	14	—	36	—	37
'58....	—	11	4	15	37	—	38	—
'59....	—	5	3	8				
1860....	—	2	3	5	—	21	—	21
'61....	—	6	2	8	30	—	30	—
'62....	—	10	7	17				
'63 {	George Victor Town- } ley, not executed }	7	6	13	—	39	—	38
'64....	—	8	1	9	23	—	22	—
'65....	—	10	1	11				
'66....	—	3	5	8	—	26	—	25
'67....	—	5	2	7				
Average		6	3	9	—	—	—	—

On the STATISTICS of the KINGDOM of the NETHERLANDS. By
SAMUEL BROWN, ESQ., F.S.S., President of the Institute of
Actuaries.

[Read before the Statistical Society, 18th May, 1869.]

CONTENTS:

	PAGE		PAGE
I.—Introductory	192	VI.—Post Office	205
II.—Population and Territory ...	193	VII.—Telegraphs	205
III.—Army and Navy in 1868 ...	199	VIII.—Education	206
IV.—Commerce	200	IX.—Finance	207
V.—Railways	203	X.—National Debt	208

I.—*Introductory.*

THE invitation of the Dutch Government to hold the next meeting of the International Statistical Congress at the Hague, having been accepted by the Commission to whom the decision was left, the assembly has been fixed for the 6th to 11th September next. The King of the Netherlands, by a decree of 17th October, 1868, appointed a Commission of Organisation, of which the Minister of the Interior was named President. His Royal Highness the Prince of Orange has also been named the Honorary President of the Congress.

Dr. von Baumhauer, Director of the Statistical Department in the Ministry of the Interior, who is so well known by his able writings, and by the active and honourable part which he has taken in all the preceding congresses, wrote the sketch of a programme of the subjects to be discussed, in which he judiciously reduced them to a small number of questions, hoping thereby to obtain a more thorough investigation and more effective results. The subdivisions proposed relate to the theory and limits of statistics, and the practical application of statistical data—statistics of civil and commercial justice and legislation, of finance, and of public companies, and two subjects of more special interest to his own country—fisheries and European transatlantic possessions—meaning by the latter, the statistics, not of colonies, but of native populations governed by Europeans.

In following out these ideas more into detail, M. von Baumhauer has written a very able and interesting treatise, which forms the basis of the actual programme issued by the commission, and which it will be seen comprises subjects deserving of special notice by this country.

In view of this approaching meeting, I venture to think that a few recent statistics on the Kingdom of the Netherlands, not

descending into minute details, but under the broad divisions of population, army and navy, commerce, canals and railways, finance, and foreign possessions, might be useful to some members of this Society. I have to thank Dr. von Baumhauer, who, in the midst of much occupation, has kindly forwarded me some tables corrected to last year inclusive.

II.—*Population and Territory.*

The Kingdom of the Netherlands, consisting of the territory of the ancient Seven United Provinces, and some portions of the province of Limbourg, lies between 50° 44' and 53° 34' N. latitude, and 3° 30' and 7° 10' E. longitude. It is bounded on the east by Germany, on the north and west by the German Ocean and the North Sea, and on the south by Belgium, with the frontier as fixed by the Treaty of 15th November, 1831, and comprises about 11,000 square miles.

The total population, as computed to 31st December, 1868, was as follows:—

	Extent in Hectares.	Population.	Density. Hectares to every 1,000 Inhabitants.
North Brabant	512,796	434,832	1,176
Guelderland	508,659	437,019	1,164
North Holland	299,122	692,140	432
South „	273,004	585,920	466
Zealand	176,266	179,313	983
Utrecht	138,451	176,506	784
Friesland.....	327,480	298,744	1,096
Overijssel	332,220	258,255	1,287
Groningen	229,226	231,087	992
Drenthe	266,272	107,612	2,475
Duchy of Limbourg	220,502	226,801	972
	3,283,997	3,628,229	905

The total population shows an increase over the year 1867 of 35,813 on 3,592,416, or nearly 1 per cent. The previous rates of increase between the censuses had been:—

	Per Cent.
1829-39	9'45
'39-49	6'87
'49-59	7'74
'59-67	9'08

The most populous province was North Holland, showing only 432 hectares to every 1,000 inhabitants, and the least peopled was Drenthe, in which there were 2,475 hectares to every 1,000 inhabitants; and the average of the whole country, 905 hectares to every 1,000 inhabitants, or about 2¼ English acres to each.

The pure Dutch, or *Netherlanders*, number about 2,070,900, and are found dispersed through the provinces of North and South Holland, Zealand, Utrecht, and Guelderland; the *Friesians* speaking a dialect of the Dutch language in Overijssel, Drenthe, Groningen, and Friesland, number about 895,700; North Brabant contains almost entirely a *Flemish* population of nearly 435,000.

In 1859, when the religion was distinguished, there were about in number—

Protestants	1,942,387
Lutherans	64,539
Catholics	1,234,486
Greeks	32
Israelites	63,890
Unknown	3,794

The Protestants being about 60·6 per cent., and the Catholics 37·3 per cent. of the whole.

Next to England and Belgium, the Netherlands contain a larger town population relative to the total numbers of the people than any country in Europe, and very nearly equal to the proportion in Belgium. Thus, about the year 1861, the proportion of town population was in England and Scotland 19·5 per cent. of the whole; in Belgium, 11·7; and in the Netherlands 11·1 per cent. In 1868 the principal towns of the Netherlands were:—

	Population.		Population.
Amsterdam	271,764	Maestricht	28,679
The Hague (the residence of the King and the Royal family	90,058	Amhem	31,792
Rotterdam	118,837	Leeuwarde	25,048
Utrecht	60,999	Bois le Duc	25,038
Leyden	39,294	Dordrecht	24,878
Groningen	37,634	Nimeguen	22,860
Haarlem	30,916	Delft	22,280
			<hr/> 830,077

Each of these towns shows a considerable increase in population over the previous year, and although they by no means equal the large towns in England, in which, besides London, Liverpool, Glasgow, Manchester, Birmingham, and Dublin, which were all, in 1865, much more populous than Amsterdam, still they form together a considerable part of the whole.

The population statistics of the Oriental possessions of the Netherlands are like those of other countries similarly situated, not yet in a very satisfactory state, and are to be made a subject for discussion at the next Congress. Dr. von Baumhauer, in his sketch of the programme, gives an idea of the difficulties which have attended the obtaining a correct census. In the Dutch East Indies, as far back as 1819, the chiefs of the villages were required to keep a correct register of the inhabitants, showing the profession

and the age of each native; also a register of births, deaths, and marriages, to be kept by the assistance of the priest of each village.

In 1836, a part of the public debt being charged upon the Oriental possessions, suggested a better organisation for increasing the products of the soil and the system of forced labour, whilst it made a true census of the greater importance, naturally led to false estimates of the extent of land and population by the chiefs of villages and districts in order to escape their due share of the taxation.

In 1844, M. G. L. Baud proposed to the Governor-General Merkus the forms of a census to be collected in each village, district, and regency, distinguishing the population into adults, male and female; boys above and under 12 years; and girls. Besides the occupation of the men, the number of cattle and beasts of burden, the nature of the cultivation of the soil, and the extent of land in the plantations were required to be stated. But the expenses of these researches were thrown upon the separate residences; and, although in one subresidence of thirteen districts, the effect of the census was to show an increase of the land liable to public burdens which augmented the treasury by 150,000 florins, the refusal to reward the natives who had zealously assisted in the work, led to the general failure of the operation. The annual reports on the state of the colonies, which have been made to the Legislative Chambers since 1848, have at various times drawn attention to the defects of the population returns, and in 1861, the Central Statistical Commission made a report on the subject, approving generally the plan of M. Baud, above referred to, and admitting that the census could not be taken in a single day or night, advised the establishment of village registers, but with the paid services of the notaries or village writers.

In Java great improvements have been effected since 1857 in the survey of the country on a general scale of $\frac{1}{25000}$, combining with the survey the collection of agricultural statistics. Since 1864, an annual sum of 300,000 florins has been allotted out of the colonial budget for the extension of the survey, the triangulation of the island of Java, and general statistical labours.

The total population of the colonial possessions of the Netherlands, to the most recent date, is given as follows :—

	Year.	Geographical Square Miles.	Population.
East Indies	1866	28923·2	21,270,270
West „	'67	2829·6	85,182
Coasts of Guinea	'59	500·3	110,118
Total	—	32253·1	21,465,570

The population of the East Indies, in December, 1866, is subdivided into eighteen residences, of which the principal are Java and Madura, with 14,552,473 inhabitants; Sumatra (west coast), 1,903,686; Palambang, 544,508; Borneo (west side), 329,223; Borneo (south and east side), 830,112; Celebes, 325,544; the Moluccas, a total of 815,699; Timor, 1,640,000 inhabitants; and the rest much smaller numbers.

In 1866, the European population in the Dutch Indies numbered 29,132, of whom 23,574 were born in the colonies, 3,427 in the Netherlands, and 1,231 in other European states. The total shows a decrease of 4,535, or nearly $13\frac{1}{2}$ per cent., since 1863.

The population of the West Indian colonies, on 31st December, 1867, is stated as follows:—

Surinam	50,364
Curaçao	20,702
Aruba	3,652
Saint Martin	2,945
Bonaire	3,833
St. Eustache	1,880
Saba.....	1,806
	<hr/>
	85,182

Going back to the Government returns of 1866, we may obtain a few more population statistics of the Netherlands. The total population of 31st December in that year was 3,552,665, of whom 1,760,679 were males, 1,791,986 females, or 1,000 males to 1,013 females. The proportion of females has regularly diminished in each year from 1,031 in 1859.

	Male.	Female.	Total.	Legitimate.	Illegitimate.
1866.					
Births	64,234	61,019	125,253	120,558	4,695
„ still-born	3,846	3,090	6,936	6,512	424
Total	68,080	64,109	132,189	127,070	5,119
Deaths	51,738	50,113	101,851	—	—
1867.					
Births	—	—	126,504	121,921	4,583
„ still-born	—	—	6,442	—	—
Total	—	—	132,946	—	—
Deaths	43,118	41,649	84,767	—	—
Marriages	—	—	29,935	—	—

The still-born children, in 1866, were 6,936. Including the still-born, the proportion of male to female births was 1,000 to 941.

The still-born children were much greater in the illegitimate than in legitimate births, being 9.08 and 5.41 per cent. on the living born. From the comparison of the various countries of Europe, it will be seen that, in the proportion of illegitimate births, the Netherlands is at the bottom of the scale, showing only 44 to 1,000 legitimate births the average of all countries being 87, and Bavaria as high as 279, owing no doubt to marriage legislation. In 1866 the proportion in the Netherlands was only 39 in 1,000, and appears to have been gradually diminishing since 1857, when it was nearly 43 in 1,000.

Amongst the births there were 1,686 twins, 17 triplets, and 1 of four children, born in Amsterdam in the month of February.

On comparison of the deaths it will be found that, in 1866, on the total population, the rate was 2.87 per cent., the births being 3.53 per cent., and the marriages 29,620 = .83 per cent.

The deaths under 1 year of age were, in 1866, 23.3 per cent. of the whole, and in 1867, 29.4 per cent.

Of the deaths, the proportion in every 1,000 was, males, unmarried 628, married 275, widowers 97; and of the females, unmarried 570, married 255, widows 157.

Of the total marriages, 29,620 in 1866, and 29,935 in 1867; the proportions between the different classes of the sexes was as follows, compared with the same classes in England :—

Marriages.	Netherlands.		England.
	1866.	1867.	1851-53.
Bachelors and spinsters	796	820	826
„ widows	42	48	42
„ wives divorced, &c.	1	—	—
Widowers and spinsters	113	102	85
„ widows	46	30	47
Divorced men with spinsters or widows, &c.	2	—	—
	1,000	1,000	1,000

The marriages may also be subdivided in the proportion in which they were contracted at different periods of age, and compared with the same particulars for England and Belgium.

Proportion of Marriages according to Age.

		Netherlands, 1866.	England, 1851-53.	Belgium, Mean, 1841-45.
Men aged 30 and under, with women aged.....	Under 30.....	4,880	7,199	4,377
	30—45.....	760	359	857
	45—60.....	20	4	39
	60 and upwards....	—	—	2
Men aged 30—45, with women aged	Under 30.....	1,837	979	2,011
	30—45.....	1,572	888	1,799
	45—60.....	127	54	177
	60 and upwards....	2	1	6
Men aged 45—60, with women aged	Under 30	119	38	124
	30—45.....	373	221	317
	45—60.....	186	159	155
	60 and upwards....	7	7	9
Men aged 60 and upwards, with women aged.....	Under 30	9	4	15
	30—45.....	36	21	46
	45—60.....	54	47	49
	60 and upwards....	18	19	17
Numbers observed.....		10,000 29,620	10,000 231,797	10,000 145,655

	Netherlands.		England.		Belgium.	
	Men.	Women.	Men.	Women.	Men.	Women.
Under 30	5,660	6,845	7,562	8,220	5,275	6,527
30—45	3,538	2,740	1,922	1,489	3,993	3,019
45—60	685	387	425	264	605	420
60 and upwards	117	28	91	27	127	34
	10,000	10,000	10,000	10,000	10,000	10,000

It thus appears, if the proportions have not much altered in recent years, that the marriages according to age, in the Netherlands, agree much more nearly with Belgium than England. By far the highest proportion of men under 30 marrying women under 30, in England, being 7,199, whilst in the Netherlands it is 4,880, and in Belgium 4,377 in 10,000 marriages; and the same observation may be made as to the totals of males and females marrying under 30 years of age. At 45 and upwards the Netherlands show 802 marriages of men and 415 of women; whilst England only shows 516 of males and 291 of females, and Belgium 732 of males and 454 of females in every 10,000 marriages.

In this report the materials are afforded for comparing the population statistics of towns of 10,000 inhabitants and upwards with the smaller towns and villages, also of the mortality according

to months. But the four months, May to August, in 1866, are disturbed by the effects of the Asiatic cholera, which seems to have reached its maximum in July. In 1,000 deaths for each month, or 12,000 in the year, the proportion by seasons were :—

	Males.		Females.	
	1865.	1866.	1865.	1866.
January to April	4,345	3,603	4,423	3,666
May to August.....	3,909	5,174	3,869	5,097
September to December	3,746	3,223	3,708	3,237

Contrary to the general rule the mortality seems to have been least in the last four months of the year, but this is not borne out by the averages for 1850 to 1859, and 1860 to 1864, when May to August show the most favourable results.

Time does not allow of pursuing this part of the subject farther.

III.—*Army and Navy in 1868.*

Conscripts are registered at the age of 19, and drawn by lot at 20. The duration of the service is five years, and substitution is allowed.

Troops.	Officers.	Soldiers.
Etat-major, general and administrative	171	—
<i>Infantry—</i>		
Etat-major	39	—
1 regiment, grenadiers and chasseurs	98	3,676
8 regiments of the line of four battalions each	779	36,696
1 battalion of instruction, four companies	31	664
Depôt of discipline	12	44
<i>Cavalry—</i>		
Etat-major	7	—
5 regiments of dragoons	174	4,102
<i>Engineers—</i>		
1 battalion	25	931
Etat-major	67	39
<i>Artillery—</i>		
Etat-major	76	50
1 regiment of field artillery (11 batteries of 8 guns)....	87	2,765
3 regiments of fortress artillery	193	6,447
1 regiment of horse artillery (4 batteries of 8 guns)....	31	603
Pontoniers	11	300
Gendarmerie (two companies)	10	372
	1,811	56,689

A considerable reduction has been effected in the army during the past year, the forces being less by 170 officers and 2,638 men.

The army of the Indies, on 31st December, 1866, consisted of: Officers—Etat-majors 396 men, infantry 718, artillery 80, cavalry 37, sappers 24. Total 1255. Sub-officers and baggage-trains—10,246 Europeans, 463 Africans, 965 Amboynese, 13,874 natives. Total 25,548 men, with 1,019 horses.

The navy comprised (not distinguishing each separate class):—

	Guns.
5 screw frigates, of 51 and 20 guns	218
1 battery (iron-plated)	14
32 screw steamers, 6 to 16 guns	286
8 paddle-wheel, „ 1 „ 8 „	46
5 other vessels	40
5 armoured ships	12
5 Monitors	10
<hr/> Total 61 vessels, steam	<hr/> 626
5 floating batteries, 13 to 32 guns	106
1 ship of the line	30
5 frigates, first and second class	168
48 other vessels	287
<hr/> Total 59 vessels, sailing	<hr/> 591
<hr/> Total 120	<hr/> Total 1,217

The personnel of the navy is composed of 1 admiral, 1 lieutenant-admiral, 4 rear-admirals, 20 captains, 40 lieutenant-captains, 340 lieutenants first and second class, 110 midshipmen of first and 87 of second and third class, 105 medical officers, 89 officers and 52 sub-officers of the administration, 9 others, engineers, &c.

On 1st August, 1868, the naval forces consisted of 5,787 men, of whom 3,200 were for the East and 275 for the West Indies, 2,312 for home and foreign service.

The effective force of the marines on 1st July, 1867, was 46 officers and 2,085 sub-officers and soldiers.

IV.—*Commerce.*

The foreign commerce* of the Netherlands appears to have increased in each of the three years 1865, 1866, and 1867. The total imports and exports are given as follows:—

	Imports.	Exports.
	fl.	fl.
1867.....	552,084,793	449,217,611
'66.....	528,971,700	436,590,752
'65.....	500,528,378	438,991,127

* It may be mentioned that the French metric system of weights and

Converting the values at the rate of 12 florins = 1*l.*, as we may do in all subsequent values, the total amounts were, in 1865 (imports and exports), 78,273,000*l.*; in 1866, 80,464,000*l.*; in 1867, 83,442,000*l.*; the year 1866 showing an increase of 2·8 per cent. over 1865, and 1867 of 6·6 per cent. over 1865.

In 1866, we find a table in the “*Almanac de Gotha*,” showing the imports and exports of the Netherlands according to the names of the countries, the substance of which may be briefly given in the following form. In Europe the total imports were 60,154,000*l.*, the exports 54,626,000*l.*; and of the exports there were in transit 6,570,000*l.* Of this trade the largest amount of imports was from Great Britain (12,304,000*l.*); the exports there being 10,053,000*l.* The next highest was with the Zollverein of Germany, imports 11,421,000*l.*, exports 12,025,000*l.*; and then Belgium, imports 4,334,000*l.*, exports 3,808,000*l.*

In the trade with America the imports were 1,482,000*l.*, the exports 674,000*l.*, of which the United States shared in about one-third.

With Asia and Africa the commerce was relatively very small. With the Dutch foreign possessions the total trade was, imports 7,911,000*l.*, and exports 4,663,000*l.*, of which nearly the whole was between Java and Holland, and of which the imports exceeded the exports by about 3,280,000*l.*

In one of the very able reports by Mr. Ward, Her Majesty's Secretary of Legation at the Hague, will be found, for the same year, the result of the imports and exports of some of the principal articles of commerce, chiefly with great Britain, as compared with 1865. Amongst the imports, machinery had increased in value from about 468,000*l.* to 632,000*l.*; and the same, for home consumption, from 330,000*l.* to 340,000*l.* Cotton yarns had increased in weight from 8,530,000 to 12,470,000 kilograms; but rough copper had diminished from 4,685,000 to 3,132,000 kilograms. Cotton tissues (plain) had increased in value from 431,000*l.* to 819,000*l.*; and for home consumption from 295,000*l.* to 486,000*l.* Cotton (dyed or prints) had increased from 1,295,000*l.* to 1,428,000*l.*, and for home consumption from 494,000*l.* to 546,000*l.*

In the articles of export from the Netherlands, in weight or value, the greatest increase was in butter, rags (especially to England), refined sugar, meat, and mutton and pork (fresh); whilst the heaviest falling off was in flax and (owing, no doubt, to the cattle plague in that year), in horned cattle, pigs, sheep, and lambs. There was also a slight diminution in the value of cheese exported.

measures was adopted in the Netherlands in 1820, retaining, however, old names and using “*ell*” for metre, and “*milje*” for kilometre.

	1865.	1866.
<i>Increase in Value—</i>	£	£
Butter	1,481,000	1,533,000
Paper	148,000	206,000
„ of home manufacture.....	72,000	92,000
<i>Increase in Weight—</i>	Kilograms.	Kilograms
Rags	1,387,000	2,070,000
„ to England	566,000	1,490,000
Refined sugar	76,650,000	84,668,000
Meat	1,269,000	3,703,000
Mutton and pork (fresh)	112,000	5,435,000
<i>Decrease in Value—</i>	£	£
Cheese	2,692,000	2,591,000
<i>Decrease in Weight—</i>	Kilograms.	Kilograms.
Raw sugar	28,220,000	16,839,000
Flax	22,568,000	10,746,000
<i>Decrease per Head—</i>	Number.	Number.
Horned cattle.....	196,790	46,790
Pigs	77,580	40,720
Sheep and lambs	397,940	95,200

The effect of the cattle plague is very visible in these trade statistics by the substitution in the exports of meat (fresh or otherwise) for the living animal. The increase of meat was nearly three-fold in weight, and fresh mutton and pork exported nearly forty-six times as much in 1866 as in 1865, as a set-off against the reduction of horned cattle, sheep, and lambs, to about one-fourth, and of pigs to a little more than half their number in the previous year. In the volume of "Reports of Her Majesty's Secretaries of Embassy and Legation, No. 2, 1867," p. 346, is a report from Mr. Ward, on the vigorous measures taken by the Netherlands Government, in 1866, to stamp out the disease, by the separation of the infected districts by a cordon, guarded by a military force, and vessels of the royal navy stationed in such rivers and navigable channels as would maintain the line marked out. The principal infected districts were South Holland and Utrecht. In the former there were, in 1866, 75,999 cases, of which 33,046 died and 14,664 were slaughtered out of 199,648 cattle in the district; and in the latter 41,763 cases, of which 23,692 died and 3,479 were slaughtered out of 76,989 head. North Holland and Guelderland also suffered, but not so heavily. In the four provinces, out of 581,000 head, there were 123,000 cases, 57,500 died and 23,000 were slaughtered. The extra charges for the military and naval forces were about 26,600*l.*, and for compensations and veterinary charges about 133,300*l.* more. These remarks will explain in some

degree the alterations in the course of the year in the foreign trade returns above alluded to.

In regard to the mercantile marine, the number of vessels on 31st December, 1868, was stated to be 2,117, and 535,192 tons. In 1866, 2,178 ships, of 540,084 tons. In that very valuable little work, "Statesman's Year Book for 1869," the Dutch mercantile marine is said to have diminished, since 1864, from 2,289 vessels of 554,244 tons, to 2,159 vessels, of 270,082 tons, at the end of 1867. But it seems probable that these should be quoted as "lasten," which would double the amount of tonnage, and then the averages would nearly agree with the preceding statement corrected by Dr. von Baumhauer.

Mr. Ward, in 1867, gives a table of the number of ships, and their tonnage, cleared inwards and outwards from 1831 to 1866 inclusive, under the Netherlands flag, under other flags, and in ballast. From this it would appear that the Dutch shipping has somewhat declined of late years, the entries inward under the Netherlands flag being the highest (3,831 ships of 687,481 tons) in 1864. But the foreign shipping has so increased that the total is the highest in last year, to which it has steadily increased from 1864.

	Under Netherlands Flag.		Under other Flags.		Total.		In Ballast.	
	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
<i>Inwards—</i>								
1865	3,270	623,685	4,631	1,132,889	7,901	1,756,574	649	130,644
'66	3,151	584,289	4,791	1,240,014	7,942	1,824,252	526	89,875
'67	3,038	585,961	5,090	1,374,883	8,128	1,960,844	481	78,466
'68	—	—	—	—	7,741	1,989,814	533	76,158
<i>Outwards—</i>								
1865	2,312	498,835	2,785	790,445	5,097	1,289,280	3,691	696,065
'66	1,989	411,768	2,725	819,988	4,714	1,231,756	3,702	717,307
'67	2,064	437,633	2,981	906,558	5,045	1,344,191	3,707	777,801
'68	—	—	—	—	5,235	1,377,799	3,200	722,324

The proportion of the Netherlands shipping, both inwards and outwards, appears generally little more than half the foreign, and in 1867 even less.

V.—*Railways.*

The railways in Holland are of comparatively recent date. In the middle of 1863 there were but five lines in the country, and these were disconnected and some of different gauge from the foreign railways they were meant to join. Within the last few years, however, they have made rapid progress in the traffic and

carriage of passengers. The system of State railways was constructed in pursuance of a law passed in 1860, and 10,000,000 florins annually were appropriated for their formation. The total length is intended to be about 889 kilometres, of which last year 708 kilometres were finished. They are worked by a company, under certain conditions, for a term of fifty years, with power to the Government to purchase at the end of twenty, thirty, or forty years on fixed terms. The rate of passenger fares is not to exceed 5 cents per kilometre first class, 4 cents second class, and $2\frac{1}{2}$ cents third class.

In 1866, with 598 kilometres open, they yielded total receipts of 1,592,146 florins, = 133,000*l.*, of which 73,000*l.* were for passengers.

The number of passengers was 1,291,071, of which first class formed 6.4 per cent., second class 14.8 per cent., and third class 78.8 per cent.

In all the lines there was a considerable falling off in traffic and receipts in 1866, owing to the war, the cholera, cattle disease, and bad weather.

It will be fairer to take 1865 for the results.

The other principal lines, in 1865, were—

	Passengers.			
	First Class.	Second Class.	Third Class.	Total Number.
Hollandsche IJzeren Spoor- weg.....	193,031	309,877	1,301,604	1,804,519
Rijnspoorweg Maatschappij ..	—	—	—	1,286,311
Nederlandsche Centraal	12,197	43,004	170,104 17,297	242,596

	Receipts.				
	Passengers.	Luggage and Goods.	Cattle, &c.	Various.	Total.
	fl.	fl.	fl.	fl.	fl.
Hollandsche IJzeren Spoor- weg.....	1,282,633	217,862	34,716	40,439	1,568,650
Rijnspoorweg Maatschappij ..	1,768,931	1,578,177	146,516	313,379	3,809,003
Nederlandsche Centraal	229,389	74,816	26,226	14,890	345,321

	Merchandise Carried.	Head of Cattle, &c.
Hollandsche IJzeren Spoorweg	18,534,661 kilograms	64,795
Rijnspoorweg Maatschappij.....	475,122 tons	—
Nederlandsche Centraal	18,357,889 kilograms	34,559

VI.—*Post Office.*

The increase in the delivery of letters is shown in the following statement for the years 1865, 1866, and 1867 :—

	Inland.	Foreign.	Total.
1865	18,496,291	5,130,906	23,627,197
'66	20,010,962	5,622,817	25,633,779
'67	20,784,097	6,025,258	26,809,355

Since 1864 to 1867 the increase has been 21·3 per cent., being 18·6 per cent. inland and 31·9 per cent. in foreign letters.

Of printed packets the increase has also been rapid, 9,335,372 in 1864, 9,695,276 in 1865, and 10,416,583 in 1866. Of this about one-fifth part is foreign, in which the rate of increase was relatively small. Of the inland postage, newspapers, at 1 cent (one-fifth of a penny), had increased in the two years 1864 to 1866 about 12 per cent.; and other packets, at 2 cents, about 22 per cent.

Of the foreign post the number of letters sent to the Dutch colonies and to Belgium were about equal, averaging about 545,000 in each of the three years; to Germany, about 453,000; to France about 304,000; and to Great Britain, about 258,000 letters per annum.

In 1866, the total receipts of the post office were 2,311,406 florins, = 192,617*l.*; and the expenses 1,293,390 florins, = 107,783*l.* The receipts, when compared with 1849, the last year of the old tariff, showed an improvement of 71 per cent.; and over 1854, the last full year before the introduction of the new lowered tariff, of 53·3 per cent.

In 1867 there were 2,692 persons in the postal service, and the number of Dutch miles or kilometres served by delivery was 38,771.

VII.—*Telegraphs.*

On the 1st January, 1863, the total length of the telegraph lines was 1,615 kilometres; in 1867, 2,157 kilometres, and of wires 6,268 kilometres.

	Number of Messages in 1867.	
	Sent.	Received.
Inland stations	492,733	492,678
By Belgian lines.....	57,339	61,525
„ German „	74,402	79,565
„ International Telegraph	46,018	51,421
Total	670,492	685,259

The number of messages sent and received had increased from 788,690 in 1863, to 1,355,751 in 1867, an increase of nearly 72 per cent.

By a regulation of 12th December, 1867, the cost of a message of twenty words, between any two stations in the kingdom, was fixed at 30 cents, = 6*d*.

	fl.	£
For inland messages	485,219	
„ outward „	713,771	
	<hr/>	
	1,188,990	= 99,082
<i>Costs—</i>	fl.	
Inland	259,764	
International	155,612	
For 249,964 through messages....	80,424	
	<hr/>	
	495,800	= 41,317
	<hr/>	

VIII.—*Education.*

The variety and excellence of the public schools in the Netherlands, compared with the total population, are generally admitted. In the State universities or high schools of Leyden, Utrecht, and Groningen, the number of students in 1864 was 1,283, inscribed under the heads—

	Theological.	Jurisprudence.	Medicine.	Mathematics and Natural Philosophy.	Philosophy and Literature.	Total.
Leyden	107	302	100	23	34	566
Utrecht	187	211	64	31	15	508
Groningen	51	62	68	15	13	209
Total	345	575	232	69	62	1,283

Of the lower-class schools, in 1864—

	Number of Schools.	Teachers.			Scholars on 15th January, 1864.		
		Male.	Female.	Total.	Male.	Female.	Total.
Public schools....	2,558	6,541	296	6,837	188,213	145,694	333,907
Private schools not subsidised	} 905	2,023	1,184	3,207	37,251	44,958	82,209
Private schools subsidised	} 151	207	114	321	3,298	2,779	6,077
Population in 1864.....	3,614	8,771	1,594	10,365	228,762	193,431	422,193
	—	—	—	—	—	—	3,453,425

The number of the scholars is given for the 15th January, that being the highest number of the four quarters. On the 15th October the number of scholars was lowest, male 197,003, female 176,757, together 373,760.

Besides these schools, we might enumerate others, for the deaf and dumb, and the blind, for idiot children, for drawing, industry, the arts, painting, music, military and naval schools, &c.

IX.—*Finance.*

The estimates for the budget of 1869, exhibit the expenditure as about 8,060,000*l.*, and the estimated income as about 8,095,000*l.* The items are as follows:—

Budget for 1869.

INCOME.		EXPENDITURE.	
	fl.		fl.
Land tax	8,956,000	Royal household.....	750,000
Assessed taxes (personal)	6,870,000	The Cabinet	30,375
Licences	2,590,000	States General	248,185
Excise	25,230,000	Council of State	93,815
Indirect taxes	14,076,000	Exchequer	104,700
Import and export duties	4,380,764	Chancellery of Orders ...	56,300
Gold and silver plate dues	251,300	Pensions	50,679
Public domains	1,280,000	Ministry of Foreign } Affairs	525,094
Post office.....	2,450,000	Ministry of Justice	3,106,459
Telegraph.....	553,500	„ the Interior	21,106,786
Government lotteries	410,000	„ Marine	9,383,562
Shooting and fishing } licences..... }	110,000	„ Finance	14,033,285
Pilotage	750,000	„ War	14,659,000
Mining dues	943	„ Colonies	2,000,360
Profit of State railways ...	320,000	Protestant and Israelite } worship	1,758,428
Belgian share of national } debt	400,000	Roman Catholic wor- } ship	689,358
Colonial surplus	3,475,000	National debt	28,073,637
Former surpluses	4,360,000	Various charges	50,000
Various receipts	20,673,126		
Total.....	97,136,633	Total.....	96,720,023
	=£8,094,720		=£8,060,002

Compared with the estimates for 1868, the principal reductions are in the land tax and assessed taxes, together amounting to nearly 226,000*l.*, and in the colonial surplus, which is reckoned at about 595,000*l.* less than last year. The Japanese indemnity, about 4,000*l.*, appeared also in the last estimate, and not in the present, and, under the head of former surpluses, the reduction is nearly 1,093,000*l.* But the miscellaneous receipts, which probably include the estimate of further profits from the colonies, exceed those of last year by 1,580,000*l.*

Under the head of excise the items are :—

	fl.	£
Sugar	4,000,000	
Wine	1,600,000	
Brandy	13,250,000	
Salt	2,850,000	
Soap	1,280,000	
Beer and vinegar	600,000	
Duty on cattle	1,650,000	
	<hr/>	
	25,230,000	= 2,102,500
	<hr/>	<hr/>

The general result is a reduction in the estimated receipts of about 245,000*l.*

On the other hand, there is a diminution in the estimated charges for the superior departments of State, but principally in the Ministry of the Interior, the Marine, and the Colonies, and a slight increase for the Ministry of Finance and of War, the total effect of which is to reduce the charges by about 205,000*l.*

On comparing this budget with the one given in Mr. Ward's report for 1866, it will be found to present a considerable diminution of expenditure. The sums voted for the service of the year 1865-66, were 9,247,000*l.* This, included in the Department of the Interior, the sums for the construction of the State railways, amounting to 13,500,000 florins, and the increase of 4,000,000 florins in the vote for the Finance Department for the year, was accounted for by the cession of revenue to the communes in compensation for the local taxes on consumption abolished during the preceding session, and the law for which came into operation on the 1st May, 1866. The estimated colonial surplus for 1865-66, was 25,000,000 florins; the actual receipts 31,000,000 florins.

	Revenue.	Expenditure.
	£	£
1865.....	8,978,563	8,837,876
'66.....	9,653,107	8,823,644
'67 (estimated)	8,214,767	8,863,013
'68 ,, 	8,340,184	8,264,665

The last corresponds very nearly with the actual revenue and expenditure of 1863.

X.—*National Debt.*

The public debt in 1869 is estimated as follows :—

	Capital.	Interest and Repayments.
	fl.	fl.
At 2½ per cent.	653,143,702	16,328,593
„ 3 „	98,752,712	2,962,581
Exchequer bills at 3½ per cent.	13,528,000	478,730
At 4 per cent.	191,984,500	7,679,380
Loan for roads	16,476	557
Various	—	126,297
Repayments	—	490,500
	957,425,390	28,066,638

The total debt, therefore, now amounts to 79,785,450*l.*, with an annual charge of about 2,338,886*l.* It has been steadily diminished for some years. In 1866, 1,217,722*l.* was applied towards the reduction, which included about 320,000*l.*, the last instalment for the Scheldt dues. From 1850 to 1866 no less than a nominal debt of 271,678,025 florins, about 22,640,000*l.*, had been written off by an actual repayment of 202,038,146 florins, = 16,836,000*l.*, thereby reducing the annual interest by 8,374,873 florins, = 697,900*l.* This has been principally achieved by a sinking fund, aided by incidental sources of revenue.

The large item found in the budgets under the head of colonial surplus, requires some notice of the Dutch East Indian possessions, and the mode of managing them. We may again refer to the able reports of Mr. Ward, and without going back to their earlier progress, confine the statistics to the period since 1864, when a bill was passed for bringing the finances of Netherlands India under the immediate control of the legislature of the State. The practice previous to that time, had been to present with the annual report a financial statement, closed two and a-half years previously, and to submit the estimate for the year next following, as settled by the Government in India.

The total of the estimates for 1867, as so fixed on the basis of 1865, were for 123,001,273 florins, = 10,250,000*l.*, being an excess of 5,559,760 florins, = 463,000*l.*, over the latter year. The principal excess is in the internal administration, 9,576,305 florins at home, and 969,695 florins in India, and finance 1,126,648 florins at home, and 487,678 florins in India. On the other hand, the Department of Education and Industry was reduced by 3,101,374 florins in 1867.

The income of the Governor-General was increased by 30,000 florins, which then gave him an allowance of 13,333*l.* per annum, 8,333*l.* for travelling expenses, and 2,550*l.* for maintenance of residence and other expenses.

The council consisted of a president with 3,000*l.* a-year, and four members with 2,400*l.* per annum each, &c. The total charges for the council, including the audit and the secretary's office, amounted to 71,348*l.* for 1867.

In the expenditure a large increase in the Netherlands arises from charging separately the cost of freight, warehousing, and other expenses of transporting the Government produce from India to the Netherlands, the former practice being to give only the net returns. This part of the expenditure in India, includes the salaries and appointments of European and native officers, for the general administration of the Government, the management of the land revenue, the cultures, and the forests, purchase of produce surveys, &c.

Mr. Ward explains the other items constituting the expenditure, but it is sufficient for the present purpose to state, that to meet them the total amount estimated to be obtained in the Netherlands is 60,581,417 florins, and in India 62,419,856 florins, together 123,001,273 florins, = 10,250,000*l.*

The sales of colonial produce are estimated as sold in the Netherlands at the following prices and results, the picul being computed as 60½ kilograms, and taking 1,000 kilograms as a metrical ton, to lessen the number of figures—

	Metrical Tons.		£
Coffee	50,150	at 40 cents per half kilogram	3,297,785
Sugar	42,560	„ 38 florins per 100 kilograms	1,316,079
Tin	4,840	„ 50 „ 50 „	391,920
Nutmegs	177	„ 70 cents per half kilogram	19,962
Mace	46·4	„ 80 „	5,981
Cloves	82·6	„ 25 „	3,327
			<hr/>
			5,035,054
Miscellaneous receipts			7,627
Department of War			187
„ Marine			5,583
			<hr/>
			5,048,451

To be received in India:—

	£
A. Farmed revenues (including opium, 11,000,000 florins)	1,119,689
B. Taxes and revenue of various kinds, such as customs, sales of salt, stamps, telegraphs, post office, and some direct taxes	1,469,443
C. Territorial revenue and cultures	1,091,929
D. Sale of produce and goods	1,233,935
E to H. Miscellaneous—rents, fines, sale of stores and other expenditure authorised and charged to other departments	286,658
	<hr/>
	5,201,654

The large revenue derived from the sale of produce in the mother country, has by some writers been considered very objectionable. Although the profits on the sales have generally exceeded the estimates, they are liable to great fluctuations, depending on the supply and on the state of the markets. They are also subject to varying, but generally increasing, expenses in the collection and transport to Europe.

Mr. Ward gives a table showing under the different heads of expenditure the charges for the Indian Government. Since 1855 the total has steadily increased every year from 59,966,000 florins to 101,294,000 florins in 1865, whilst the contribution from the Indian revenue to that of the Netherlands in Europe, has fluctuated in the same period from 41,658,000 florins, = 3,472,000*l.* in 1857, to 18,350,000 florins, = 1,530,000*l.*, to which it was reduced in 1865. Agriculture, land revenue and cultures, about 2,601,000*l.*, and purchase of goods and produce 988,000*l.*, are the two largest items of expenditure.

The Indian budget for 1869 is as follows:—

	fl.		fl.
Probable revenue in India	62,168,614	Colonial administration in India	84,492,520
Estimated results of sale of colonial produce }	56,865,410	Expenses and surplus in the mother country.... }	34,541,504
	<hr/>		<hr/>
	119,034,024		119,034,024
	<hr/>		<hr/>

The value of produce is placed at less than in the estimate for 1867, being only 4,739,000*l.*

The Government of Java, in its practical working, though nominally almost despotic, since the Governor-General has the power of passing laws until allowed or disallowed by the mother country, is controlled by the regulations for the Government of Netherlands India, passed in 1854. The whole country is divided into twenty-four residences, and the resident, with the assistant-resident, and a number of inspectors, are Europeans, under whose control a large body of native officials, paid either by salaries or by percentages on the amount of produce, cultivated by the natives, regulate and keep up the forced labour of the natives. The produce so obtained, is sold for the benefit of the Netherlands Government, through the agency of the Netherlands Trading Company, who act as Government brokers.

Slavery was abolished on 1st January, 1860, when the owners of 5,265 slaves received 400 florins compensation for each. The greater part of the soil is claimed as Government property, and the great bulk of the people are subject to strict laws regulating labour, and

are besides by custom liable to give one day's gratuitous work out of seven to their landlords.

For the Dutch West Indies the estimates for 1869 exhibit a considerable deficit:—

	Receipts.	Expenditure.	Deficit.
	fl.	fl.	fl.
Surinam	750,577	1,185,636	435,059
West India Islands	377,636	509,036	131,400
Coast of Guinea.....	24,000	183,000	159,000
	1,152,213	1,877,672	725,459

The total receipts are estimated at 96,000*l.*, the expenditure at about 156,000*l.*, showing a total deficit of more than 60,000*l.*

The whole system of Government culture and forced labour, seems likely to undergo further discussion in connection with the best form of collecting the statistics of foreign possessions held by European powers. Even under the most favourable conditions, such a system cannot but involve much hardship and sacrifices on the part of the native population, and being carried on at times partly under native superintendence, may also be attended with oppression and injustice. The uncertain and fluctuating character of the results, and the difficulty of getting the contracts taken, unless by being too favourable to the labourers, they involve loss to the Government, are arguments against raising a revenue by such means. It seems probable that due encouragement given to a natural extension of commerce with other nations in the products of the soil, would increase the wealth and raise the character of the native population, and produce a much larger revenue to the Government at home, obtained at less cost by the ordinary operations of trade.

The present state of this question and the whole system of Government cultures in foreign possessions, for the purpose of raising a revenue for the mother country, has been discussed in a most concise and admirable report, dated 1st July, 1868, by Mr. Thurlow, Second Secretary of Her Majesty's Legation at the Hague. In this he gives full explanations on the Netherlands India Budget of 1868, and an abstract of the Government papers, published in correction of Mr Money's tables, in his well-known work, "*Java, or How to Manage a Colony.*" He also discusses the question of forced labour; the coffee, sugar, tin and spice trades of other countries, as bearing on the value of the products of Netherlands India; the trade and navigation of Java; and the actual condition of Borneo, Sumatra, and other dependencies of Java, as affording a vast field for private industry and capital, as soon as the

question is settled, as it seems likely shortly to be, by Government giving up the farming system and throwing open the cultivation of the soil to native and European enterprise. The whole report deserves the closest study and attention.

Several other statistical questions of great interest, peculiar to the Netherlands, might be treated of, such as canals, drainage of lakes, deep-sea fisheries, &c., but they are too large and important to be disposed of in a few lines.*

We must be content, however, at present with these few broad features of a country, the inhabitants of which, by their historical records, and by the noble traits of their character, inspire us with respect and admiration. As the earliest champions of civil and religious freedom, and affording a home from intolerance and oppression, when the rest of Europe was nowhere safe from religious persecution, the Hollanders always had our cordial sympathy and aid. Having won their land from the ocean, they have only been able to maintain it against returning destruction by the most incessant patience, vigilance, and skill; and yet, on several occasions, have given proofs of the greatest unselfishness and most devoted patriotism, by voluntarily sacrificing the results of years of labour and expense and again submerged large portions of

* This could not be better illustrated than by the lucid and able report just published of Mr. T. H. Thurlow, Second Secretary of Her Majesty's Legation at the Hague, on the scheme of the Netherlands *Crédit Foncier*, as proposed by Inspector J. A. Beijerinck, for draining and bringing into cultivation a large portion of the Zuyder Zee. This great inland sea was formed by repeated inundations in the twelfth and thirteenth centuries. In 1849, Herr van Diggelen proposed even the grander scheme of dyking and draining the whole of this sea; but the success in the Haarlem lake had not then prepared the public to hope for the accomplishment of so great a design. The dyke to be raised for the present scheme would be from 3 to 5 metres high. Many difficulties and much opposition of existing interests would have to be overcome, since navigation could no longer take place between the northern and southern parts of the Zuyder Zee. Seaport towns and fishing stations would become inland towns, and existing canals for drainage might be seriously damaged. Ship canals must be constructed. The cost is estimated by the Government at nearly 10,000,000*l.* (9,975,000*l.*), by Herr Stieltjes at 9,658,000*l.*, and by Inspector Beijerinck at 8,975,000*l.*, including interest on the capital to be raised till it is finished. As to the calculation of profits, the reclaimed Haarlemmer Meer sold for 473 florins per *bunder*, or 39*l.* per *bunder* (hectare). At this price the undertaking would not pay. But the Netherlands *Crédit Foncier* reckon upon selling the land at 400 florins per hectare for sandy, and 1,500 florins for clay, soil, or as there are reckoned, 4 of the latter to 1 of the former, an average of 1,280 florins, equal 106*l.*, per hectare, which would yield a good profit. The land to be drained amounts to about 390,000 acres, averaging 4 metres of water in depth, and requiring to finish the work about 9,400 horse-power of steam, taking as the basis, by experience, 12 horse-power for a metre of water, over an area of 2,000 acres. The time required is only estimated at twenty-one months. The success of the undertaking would afford permanent occupation and the means of living for an additional population of 250,000 souls. The project only awaits the decision of the Government on some points requiring further explanations, but has been favourably entertained.

the soil rather than allow the invader a footing thereon. By their industry, honesty, and enterprise they carried on a commerce with distant lands unrivalled at the time, and had their ships and traders on every sea. They still hold colonies with populations nearly six times their own in number, with a large and increasing trade, and having so many points in common with this nation, and so many claims on our goodwill, we cannot but be gratified to notice the visible signs of prosperity and progress which these brief statistical notices reveal.

MISCELLANEA.

CONTENTS:

	PAGE		PAGE
I.—Mineral Statistics of the United Kingdom	215	VI.—Agriculture in France.....	224
II.—Local Taxation in England and Wales	216	VII.—Church Schools in England and Wales, 1867	226
III.—Annual Science Examinations, 1868-69	222	VIII.—The Statistics of the London Bankers' Clearing House for Two Complete Years, May, 1867, to May, 1869	228
IV.—Statistics of Life Assurance Offices	222	IX.—The Railways of America	231
V.—The House of Lords in 1869	223		

I.—*Mineral Statistics of the United Kingdom.*

THE Council of the Society have determined to publish, with the assent of Mr. Robert Hunt, F.R.S., an annual abstract of the quantity and value of the mineral produce of the kingdom.

The particulars will be drawn from the series of reports which were originated by the individual exertions of Mr. Hunt some years ago, and have been continued to the present time by the same influence. It is the intention of the Council to present the statistics hereafter in the concise form in which they appear at p. 244, *et seq.*, and as part of the periodical tables which form the Appendix to the quarterly numbers of the *Journal*.

Table I will be assigned to a general summary of the quantity and value of the mineral produce.

„	II	will be assigned to coal.
„	III	„ iron.
„	IV	„ tin.
„	V	„ copper.
„	VI	„ lead and silver.
„	VII	„ zinc and iron pyrites.
„	VIII	„ salt.

Besides the general summary, shown hereafter at p. 244, Mr. Hunt has given in his reports the “absolute total value of the metals and coal and other minerals;” the figures for the three years ended 1867, are these :—

	1865.	1866.	1867.
	£	£	£
Value of the metals produced from the } mines of the United Kingdom	15,773,000	14,938,000	15,187,000
Value of coal	24,538,000	25,408,000	26,125,000
Other minerals, not smelted, salt, clay, &c.	1,434,000	1,350,000	2,168,000
Total	41,745,000	41,696,000	43,480,000

II.—*Local Taxation in England and Wales.*

THE most complete account of the principal section of the local taxation of the Kingdom hitherto published, has been recently prepared for Parliament by the Poor Law Board. Local taxes are gathered from three sources—1, from real property; 2, from the traffic of persons and things; 3, from consumable articles, coals and wine within the jurisdiction of the City of London. About *four-fifths* of the aggregate of the local taxation of England and Wales is incident upon real property. It is this part only which is represented by the voluminous blue book laid upon the table of the House in answer to an order obtained on the motion of the late Chancellor of the Exchequer.

It appears from this document that the whole amount of local taxes incident on real property levied in 1868 throughout the kingdom was 16,660,459*l.*, thus discriminated in the return—

	£
1. Amount levied for poor rate	11,061,502*
2. Amount levied for the following separate rates, } which in some cases are not paid out of poor rate, viz., county rate, hundred rate, borough rate, and police rate.....	307,232
3. Highway rate, separately levied	916,779
4. Church rates	217,083
5. Lighting and watching rate	76,978
6. Improvement Commissioners.....	445,431
7. General district rates under Public Health Acts	1,736,247
8. Rates under Courts of Commissioners of Sewers, } including drainage and embankment rates	695,810
9. Rates of other kinds	1,203,397†

The gross estimated rental was 118,334,000*l.*, and the rateable value 100,613,000*l.*; on the latter amount these rates were levied. The whole sum raised in the year was equivalent to 3*s.* 3¼*d.* in the pound of rateable value.

The valuation of 1868 is the sixth more or less perfect assessment we have for all England and Wales: it may be useful to exhibit the figures for each year.

Years.	Local Tax Valuations.	
	Gross Estimated Rental.	Rateable Value.
	£	£
1840-41	Not known	62,540,030
'46-47	"	67,320,587
'49-50	"	67,700,153
'55-56	86,077,676	71,840,271
'65-66	110,079,308	93,638,403
'67-68	118,334,081	100,612,734

* This total not only includes the sum levied for the relief of the poor, but the contribution paid out of the poor rate to the county, hundred, borough, and police rates; to highway and burial boards, to commissioners of baths and washhouses and fire brigade, registration and vaccination fees, and all other expenses paid out of the poor rate.

† This total includes a sum of 981,140*l.* for general and lighting rates levied in the metropolitan district.

Half the rates falling on real property go to the relief of the poor and expenses contingent on pauperism. In this relation the subjoined table may be serviceable, and, as exhibiting the great development of relief since 1859, suggestive :—

Years ended with Lady-day.	Total Expenditure from Poor Rates and from Sums Received in Aid of Rates.	Whereof was Expended for		
		Relief of the Poor Only.	County and Police Rates.	Highway Boards, 27 and 28 Vict., Cap. 101, Sec. 33.
	£	£	£	£
1859	8,149,455	5,558,689	1,915,255	—
'60	8,075,904	5,454,964	1,936,549	—
'61	8,395,212	5,778,943	1,925,210	—
'62	8,806,074	6,077,922	2,026,916	—
'63	9,325,072	6,527,036	2,075,468	—
'64	9,680,480	6,423,381	2,163,290	—
'65	9,792,158	6,264,966	2,133,290	550,976
'66	9,989,120	6,439,517	2,209,184	578,494
'67	10,905,173	6,959,840	2,511,511	595,699
'68	11,380,593	7,498,059	2,456,578	614,893

In the Summary A, p. 218, the local taxation for each county is separately shown, the counties taking rank according to the pressure of the rate. In the Summary B, p. 220, similar particulars are displayed for the London unions and parishes, the arrangement, however, is here topographical, that the burden may be better shown as it bears upon the different metropolitan districts.

The poor rates levied in the metropolis during the ten years, together with the expenditure for the poor and for county and police rates, is given below :—

Years ended with Lady-day.	Total Expenditure from Poor Rates and from Sums Received in Aid of Rates.	Whereof was Expended for		
		Relief of the Poor Only.	County, Borough, and Police Rates.	Highway Boards, 27 and 28 Vict., Cap. 101, Sec. 33.
	£	£	£	£
1859	1,354,711	814,646	405,829	—
'60	1,358,561	796,423	417,455	—
'61	1,392,884	832,155	425,495	—
'62	1,450,563	872,070	447,963	—
'63	1,466,997	868,198	468,471	—
'64	1,489,732	876,290	472,755	—
'65	1,512,265	905,640	472,832	246
'66	1,611,055	976,262	495,269	283
'67	1,844,765	1,175,363	504,728	159
'68	2,046,466	1,316,759	559,632	412

A.—Local Taxation incident on Real Property in England and Wales.

Counties, Arranged according to the Rate in the Pound.	[000's omitted.]		Valuation.		Total Amount Raised as Local Taxes in the Parochial Year 1868.	Rate in the Pound on Rateable Value.
	Area in Acres.	Population, 1861.	Gross Estimated Rental.	Rateable Value.		
			£	£	£	s. d.
1. Cardigan	443,	72,	206,260	173,471	39,543	4 6 $\frac{3}{4}$
2. Anglesey	194,	55,	186,476	164,515	36,974	4 6
3. Surrey	479,	831,	5,668,635	4,555,798	1,023,196	4 6
4. Sussex	937,	364,	2,292,971	1,998,680	405,389	4 $-\frac{3}{4}$
5. Carnarvon	370,	96,	363,652	305,766	61,595	4 $-\frac{1}{4}$
6. Huntingdon	230,	64,	475,406	424,976	85,376	4 $-\frac{1}{4}$
7. Middlesex	180,	2,207,	17,309,950	14,326,023	2,850,138	3 11 $\frac{3}{4}$
8. Southampton	1,070,	482,	2,432,656	2,035,172	395,583	3 10 $\frac{3}{4}$
9. York, West Riding	1,709,	1,508,	7,089,127	5,900,819	1,118,190	3 9 $\frac{1}{2}$
10. Cambridge	525,	176,	1,256,700	1,064,216	199,424	3 9
11. Kent	1,040,	734,	4,592,717	3,818,159	716,166	3 9
12. Glamorgan	548,	318,	1,664,050	1,410,561	260,094	3 8 $\frac{1}{4}$
13. Monmouth	368,	175,	831,370	680,367	120,381	3 6 $\frac{1}{2}$
14. Bedford	296,	135,	694,799	611,529	106,596	3 5 $\frac{3}{4}$
15. Merioneth	385,	39,	190,282	158,892	26,762	3 4 $\frac{1}{2}$
16. Lancaster	1,219,	2,429,	12,545,511	10,720,907	1,794,396	3 4 $\frac{1}{4}$
17. Dorset	632,	189,	1,069,386	915,574	152,694	3 4
18. Gloucester	805,	486,	2,768,541	2,393,938	397,252	3 3 $\frac{3}{4}$ *
19. Devon	1,657,	584,	2,963,349	2,481,687	408,084	3 3 $\frac{1}{2}$
20. Cornwall	874,	369,	1,326,070	1,150,213	185,141	3 2 $\frac{3}{4}$
21. Essex	1,061,	405,	2,596,584	2,226,503	356,944	3 2 $\frac{1}{2}$
22. Wilts	865,	249,	1,636,691	1,404,634	224,994	3 2 $\frac{1}{2}$
23. Bucks	467,	168,	1,096,185	949,175	151,208	3 2 $\frac{1}{4}$
24. Carmarthen	606,	112,	483,227	428,976	67,393	3 1 $\frac{3}{4}$
25. Berks	451,	176,	1,217,366	1,020,127	157,360	3 1
26. Brecknock	460,	62,	274,999	244,045	37,600	3 1
27. Norfolk	1,354,	435,	2,644,422	2,294,685	353,406	3 1
28. Oxford	473,	176,	1,121,304	956,795	147,053	3 1

* The medium county.

A.—Local Taxation incident on Real Property—Contd.

Counties Arranged according to the Rate in the Pound.	[000's omitted.]		Valuation.		Total Amount Raised as Local Taxes in the Parochial Year 1868.	Rate in the Pound on Rateable Value.	
	Area in Acres.	Population, 1861.	Gross Estimated Rental.	Rateable Value.			
			£	£	£	s.	d.
29. Pembroke	402,	96,	416,445	362,188	55,923	3	1
30. Nottingham	526,	294,	1,560,304	1,381,104	212,127	3	$-\frac{3}{4}$
31. Herts	391,	173,	1,104,088	940,028	142,511	3	$-\frac{1}{2}$
32. Flint	185,	70,	368,768	322,372	48,802	3	$-\frac{1}{4}$
33. Lincoln	1,775,	412,	3,196,146	2,850,624	430,933	3	$-\frac{1}{4}$
34. Durham	623,	509,	2,649,653	2,219,935	333,859	3	—
35. Denbigh	386,	101,	475,770	412,014	61,324	2	$11\frac{3}{4}$
36. Northampton	630,	228,	1,568,727	1,355,519	201,725	2	$11\frac{5}{8}$
37. Radnor	272,	25,	162,757	141,401	21,056	2	$11\frac{3}{4}$
38. Suffolk	948,	337,	1,925,293	1,663,225	245,622	2	$11\frac{1}{2}$
39. Worcester	472,	307,	1,705,499	1,472,467	203,619	2	$9\frac{1}{4}$
40. Somerset	1,047,	445,	2,863,505	2,534,125	349,020	2	9
41. Chester	707,	505,	2,846,743	2,485,812	340,242	2	$8\frac{3}{4}$
42. Stafford	729,	747,	3,519,882	2,920,896	392,476	2	$8\frac{1}{4}$
43. Montgomery	483,	67,	376,047	331,932	44,042	2	$7\frac{3}{4}$
44. Leicester	514,	237,	1,555,109	1,322,202	173,854	2	$7\frac{1}{2}$
45. Hereford	535,	124,	954,899	826,932	106,212	2	$6\frac{3}{4}$
46. York, East Riding...	771,	280,	1,941,195	1,670,705	211,633	2	$6\frac{1}{2}$
47. Warwick	564,	562,	3,074,725	2,577,223	323,911	2	$6\frac{1}{4}$
48. Rutland	96,	22,	179,531	159,979	19,004	2	$4\frac{1}{2}$
49. York, North Riding	1,350,	245,	1,848,007	1,622,400	192,215	2	$4\frac{1}{2}$
50. Derby	659,	339,	1,750,610	1,504,896	174,888	2	4
51. Cumberland	1,001,	205,	1,218,399	1,069,205	123,784	2	$3\frac{3}{4}$
52. Northumberland ...	1,249,	343,	2,056,050	1,832,137	201,505	2	$2\frac{1}{2}$
53. Salop	826,	241,	1,558,265	1,414,575	140,511	1	$11\frac{3}{4}$
54. Westmoreland	486,	61,	458,978	402,635	30,729	1	$6\frac{1}{4}$
Total—England and Wales...	37,325,	20,066,	118,334,081	100,612,734	16,660,459	3	$3\frac{3}{4}$

B.—*Local Taxation incident on Real Property in the Metropolis.*

Unions and Single Parishes.	Area in Acres.	[000's omitted.] Popu- lation in 1861.	Valuation.		Total Raised as Local Taxes.	Rate in the Pound on Rateable Value.	Rate per Head on Population.
			Gross Estimated Rental.	Rateable Value.			
WEST DISTRICT.			£	£	£	s. d.	s. d.
Kensington.....	1,942	70,	813,791	739,810	110,357	3 —	31 6
Fulham	4,155	40,	329,359	271,198	63,491	4 8¼	31 8
Paddington	1,245	76,	987,581	740,686	115,416	3 1½	30 5
Chelsea	865	63,	335,952	279,960	66,141	4 8¾	20 10
St. George, Hanover } Square.....	1,161	88,	970,996	882,724	117,544	2 8	26 9
St. Margaret and St. John	917	68,	508,125	461,932	76,478	3 3½	22 5
Westminster	217	53,	617,715	531,221	95,278	3 7	26 2
NORTH DISTRICT.							
St. Marylebone	1,590	162,	1,128,950	1,017,073	187,203	3 8¼	23 2
Hampstead.....	2,252	19,	270,288	215,564	38,669	3 7¼	40 5
St. Pancras.....	2,716	199,	1,258,548	1,069,766	242,563	4 6½	24 5
Islington.....	3,127	155,	1,065,441	852,353	157,812	3 8½	20 3
Hackney	3,929	83,	597,190	510,407	112,511	6 —½	27 1
CENTRAL DISTRICT.							
St. Giles and St. George, } Bloomsbury	245	54,	302,086	254,819	58,994	4 7½	21 9
Strand.....	419	48,	605,635	463,683	101,516	4 4½	42 2
Holborn	164	44,	231,877	190,719	46,166	4 10¼	20 10
Clerkenwell.....	380	66,	286,903	231,022	52,703	4 6¾	16 5
St. Luke's	220	57,	271,149	228,092	55,455	4 10½	19 5
East London*	153	41,	246,954	200,420	36,733	3 8?	18 —?
West „ *	122	27,	205,407	136,969	28,958	4 2¾?	21 5?
City of „ *	434	46,	2,263,146	1,811,457	294,979	3 3¼?	120 10?

* Some of the rates collected over the whole area of the city have not been apportioned among the three City Unions but placed in the lump against the City of London Union.

B.—Local Taxation incident on Real Property—Contd.

Unions and Single Parishes.	Area in Acres.	[000's omitted.] Popu- lation in 1861.	Valuation.		Total Raised as Local Taxes.	Rate in the Pound on Rateable Value.	Rate per Head on Population.
			Gross Estimated Rental.	Rateable Value.			
EAST DISTRICT.			£	£	£	s. d.	s. d.
Shoreditch	646	129,	537,804	366,240	108,074	5 10 $\frac{3}{4}$	16 8
Bethnal Green	760	105,	329,946	223,188	85,166	7 7 $\frac{1}{2}$	16 2
Whitechapel	406	78,	338,326	285,700	85,374	5 11 $\frac{3}{4}$	21 10
St. George-in-the-East ...	243	49,	227,348	184,799	71,819	7 9 $\frac{1}{4}$	29 5
Stepney	576	57,	302,721	246,598	80,110	6 6	28 4
Mile End Old Town	681	73,	290,223	241,853	50,999	4 2 $\frac{3}{4}$	13 11
Poplar	2,918	79,	605,190	480,740	137,247	5 8 $\frac{1}{2}$	34 7
SOUTH DISTRICT.							
St. Saviour's, Southwark	250	36,	296,905	226,227	46,467	4 1 $\frac{1}{4}$	25 9
St. Olave's „	169	19,	155,812	123,226	26,696	4 4	28 —
Bermondsey	688	58,	295,137	252,786	50,803	4 — $\frac{1}{4}$	17 4
St. George's, Southwark	282	56,	209,586	167,669	51,477	6 1 $\frac{1}{2}$	18 6
Newington	624	82,	293,498	234,784	68,610	5 10	16 8
Lambeth	4,015	162,	962,481	786,482	196,425	5 —	24 2
Vandsworth and Clap- ham	11,695	70,	730,219	596,703	127,452	4 3 $\frac{1}{4}$	36 2
Lambertwell	4,342	71,	500,353	386,638	97,552	5 — $\frac{1}{2}$	27 4
Otherhithe „	886	25,	169,608	117,561	33,998	5 9 $\frac{1}{2}$	27 9
Greenwich	3,771	86,	433,825	353,072	108,472	6 1 $\frac{3}{4}$	25 3
Woolwich	7,408	76,	319,174	256,133	62,285	4 10 $\frac{1}{4}$	16 6
Newisham	11,412	32,	391,573	298,840	53,148	3 6 $\frac{1}{2}$	33 2
Total of the metropolis....	77,944	2,802,	21,686,822	16,918,114	3,501,141	4 1 $\frac{3}{4}$	24 11

Note.—There are besides the unions and parishes above, several places for the first time called upon to contribute to the relief of the poor by the Order of the Poor Law Board, dated 11th December, 1868, viz., the Charter House, Gray's Inn, the Close of St. Peter, Inner Temple, Middle Temple, and Lincoln's Inn, having an aggregate rateable value of 166l.

III.—*Annual Science Examinations, 1868-69.*

“THE annual science examinations of the Science and Art Department were brought to a close on Saturday, the 29th of May, 1869. This was the ninth general examination that has been held since the establishment of the system of aid to instruction in science in 1859. The examinations are superintended by local committees. They were in this way held at 437 centres in 1869, while last year they were only held at 261. In 1868 there were about 15,000 students under instruction, this year there were 25,000, and the number of papers worked shows a similar increase, having risen from 13,112 to 23,997. The number of candidates in the various subjects was as follows:—

Subjects, &c.	1869.		1868.	
	Number.	Ratio.	Number.	Ratio.
		Per cent.		Per cent.
Geometrical drawing	2,547	10·6	1,337	10·2
Machine drawing „	2,997	12·5	1,671	12·7
Building and naval architecture	1,993	8·3	1,206	9·2
Elementary mathematics	2,302	9·6	1,390	10·6
Higher „	85	·4	33	·2
Theoretical mechanics	631	2·6	353	2·7
Applied „	284	1·2	167	1·3
Acoustics, light, and heat	1,350	5·6	769	5·9
Magnetism and electricity	2,480	10·3	1,038	7·9
Inorganic chemistry	2,166	9·0	964	7·3
Organic „	210	·9	123	·9
Geology	609	2·5	309	2·4
Mineralogy	67	·3	38	·3
Animal physiology	2,227	9·3	1,182	9·0
Zoology	303	1·3	298	2·3
Vegetable anatomy and physiology	144	·6	112	·8
Systematic and economic botany	90	·4	73	·6
Mining	48	·2	41	·3
Metallurgy	120	·5	81	·6
Navigation	303	1·3	219	1·7
Nautical astronomy	107	·4	86	·7
Steam	148	·6	106	·8
Physical Geography	2,786	11·2	1,516	11·5
	23,997	100·0	13,112	100·0

“This is the first examination at which the scholarships of 100*l.* per annum founded by Mr. Whitworth, have been competed for. There have been about 120 candidates for them, and as soon as the results of all the theoretical examinations have been made known the practical examination will be proceeded with in the manner detailed in the minute of the Lords of the Committee of Council on Education.”

IV.—*Statistics of Life Assurance Offices.*

EXTRACTED from the *Pall Mall Gazette*, 4th June:—

“An account of the life assurance companies registered since 1844 has been obtained upon the motion of the parliamentary secretary to the Board of Trade.

Mr. Lefevre's return only embraces a few pages, and is destitute of totals, though the statistics could have been easily supplemented with a brief and useful summary. Within the period of the paper, 267 companies have been registered, the major part under the 7 and 8 Vict., cap. 110—the Act of 1844; the others under the 25 and 26 Vict., cap. 89—the Act of 1862. Forty-three of the number have been amalgamated with other companies during the years 1844-68. The paid-up capital of the offices which, finding themselves too weak on the legs to stand alone, were amalgamated with stronger enterprises, amounted to 382,479*l.*; the 'subscribed' capital being a very much larger sum. In one instance of a transferred business we note the paid-up capital was 10,658*l.*, but the 'subscribed' was 248,500*l.*

"Thirteen of the absorbed companies are described as mutual companies, having no capital in the sense of the order under which the return was made. The average capital of the other thirty companies would therefore be 12,750*l.* apiece. The lowest capital held by a company at the time of transfer was 109*l.*; the highest, 91,960*l.*

"The last amalgamation recorded in Mr. Lefevre's paper is that of the Non-Tariff Insurance Company (Limited), formerly called the Hercules Fire and Life Insurance Company (Limited), which, with a nominal capital of 100,000*l.*, 40,000*l.* subscribed, and 9,390*l.* paid up, had its 'business transferred to the Hercules Insurance Company (Limited)' in March, 1867.

"Besides those concerns which have been joined to other offices, a very large number—no less than 148—of the companies recognised by the return, have, in the words of the tabular heading, 'wound up, or supposed to have ceased business.' Hence, only 76, if we read the statement aright, out of the 267 registered life assurance companies now exist. This remarkable fact gives some sort of measure of the risks to which unwary insurers may be exposed. There are also five companies ('previously existing') that were registered under the Companies' Act of 1862, with a view to winding up; add these to the totals just given, and it then appears that during twenty-four years no less than 196 offices have either died out or been absorbed."

* * * * *

V.—*The House of Lords in 1869.*

THE *Daily News* has the following:—

"The House of Lords, as at present constituted, consists of about 460 members, of whom 15 are minors. Deducting the *Irish* and the *Scotch* representative peers and the prelates, the number of hereditary peerages is 389, and of these the large majority are the creations of the present century. Of the barons who responded to the writs of summons issued by Simon de Montfort, Earl of Leicester, 600 years ago, the descendants of three only now sit in the Upper House. They are Lords Hastings, De Ros, and Audley, the baronies of the two former dating from 1264, and that of the latter from 1296. The surviving peerages, which are creations of the fourteenth century, are four, viz., the baronies of Camoys, Clinton, Dacre, and Willoughby de Eresby. The peerages of the fifteenth century now represented are seven; of the sixteenth, 12; of the seventeenth, 35; of the eighteenth, 95; and of the nineteenth, 233. The surviving peerages, however, bear little comparison to the number of creations. When Earl Grey came into power in November, 1830, he was called upon to contend with a body which, scarcely without interruption, from the administration of Lord Bute to that of the Duke of Wellington, had been recruited through nearly seventy years of Tory rule. Sir Erskine May has stated that, from 1760 to 1830, more than 400 peerages had been created. The actual number made within the reign of George III, was 388, and during the seventeen years of Mr. Pitt's premiership upwards of 140 new patents were issued. Within two years the same minister had either created or promoted 35 new peers. A large number of these names have, however, dropped from the roll of the House of

Lords, for on an average more than twenty peers die annually, and three or four peerages become extinct every year.

“It is not surprising than when the Whigs found themselves in office in 1830, they at once began to redress in some degree the enormous disparity in the numbers of the rival parties in the House of Lords. The subjoined tabular statement shows the number of creations and promotions in the peerage made by each minister from Earl Grey’s accession to power to the present time :

	Dukes.	Marquises.	Earls.	Viscounts.	Barons.	Totals.
Earl Grey	2	2	7	—	23	34
Viscount Melbourne	—	1	7	—	31	39
Sir R. Peel	—	—	2	3	6	11
Earl Russell	—	1	5	2	16	24
Viscount Palmerston	—	—	3	1	19	23
Earl of Derby.....	—	—	2	1	22	25
Mr. Disraeli	1	—	1	1	1	4
Mr. Gladstone	—	—	—	—	3	3
	3	4	27	8	121	163

“The Liberal party have been in power during two-thirds of this period, and have created 123 peers as against 40 on the part of their opponents, yet they are still in a minority in the House of Lords. It should, however, be explained that although in less than forty years 163 new patents have been issued, the whole of them were not absolute additions to the strength of the peerage. In the majority of instances the dukes have been recruited from the ranks of the marquises, the marquises from the earls, the earls from the viscounts, and the viscounts from the barons. Rare instances occur in which a commoner at once receives an earldom, such as in the case of Lord John Russell. A retiring Speaker of the House of Commons generally receives a viscountcy, but as a rule the rank of baron of the United Kingdom is that by which an outsider enters the House of Lords.

“The list above given is irrespective of the peers’ eldest sons, who have been called to the Upper House in the lifetimes of their fathers. The Marquis of Anglesey was called up as Lord Paget in 1832, by Earl Grey; the Marquis of Ailesbury, as Lord Bruce, in 1839, by Lord Melbourne; the Earl of Lonsdale, as Lord Lowther, in 1841, by Sir Robert Peel; the Earl Derby, as Lord Stanley, in 1844, by Sir Robert Peel; Lord Stanley of Alderley, as Lord Eddisbury, in 1848, by Earl Russell; Earl Strafford, as Lord Strafford, in 1853, by the Earl of Aberdeen; the Earl of Tankerville, as Lord Ossulston, in 1859, by the Earl of Derby; Earl Fortescue, as Lord Fortescue, in 1859, by Viscount Palmerston; and Earl St. Maur, in 1863, as Lord Seymour, also by Lord Palmerston.

“The calling up of Lord Strafford by the Earl of Aberdeen was the only patent of peerage conferred by that nobleman during his tenure of office, a period which extended over more than two years. Even his chancellor, Lord Cranworth, had been a member of the Upper House two years before his appointment to the woolsack.”

VI.—Agriculture in France.

FROM the *Pall Mall Gazette* of 28th May, 1869:—

“The consideration of the *land question* in Ireland has, by mutual consent, been deferred till next session, when the battle will again rage between the advocates of small and those of large holdings. The intervening time may well be

spent in considering such information as foreign countries may afford us. We would commend to the attention of both parties the report of a commission appointed by the French Government in the year 1866 to inquire generally into the condition of French agriculture. The commission began by distributing a series of questions through the twenty-eight districts into which France was divided for the purposes of this inquiry. The answers thereto, supplemented by verbal evidence, as well on the condition of France as of other countries, have now appeared in the shape of an imperial blue book.* M. J. de Monny de Mornay, the chief commissioner, contributes a valuable preface in which all the material facts may be found.

“ He divides agricultural property into three classes. First, *large estates* of over 250 acres. These are few in number in most departments, and make up but a small proportion of the holdings in France. The only check upon their diminution is the desire of the successful merchant or manufacturer to become a landed proprietor. Secondly, an *intermediate class* between the first class and that of the small proprietor. These also have a tendency to diminish in number. They are farmed either by the owner or by tenants at a money rent, or on the *métayer* system. The *third class* is the most numerous, and is ever on the increase. The small proprietors, with the assistance of the agricultural labourer, of whom it is calculated 75 per cent. are landowners, eat up the fragments from the other two classes. Their intense desire to add field to field, leads them to spend their capital rather in the purchase of more land than in the improvement of what they already possess. For this reason, too, land which is sold in large blocks, or which is unfitted for cultivation on a small scale, fetches comparatively a less price than land sold in lots suited to the pocket of the small proprietor.

“ Subdivision, it appears, has reached an incredible pitch. Parcels of land, in the eastern parts especially, are sometimes of *one or two roods* only, and even of a less extent; and not unfrequently parcels in the possession of one man lie at a distance of several kilometres from each other. As a kilometre is rather more than half a mile, one is inclined at first to think the commissioner's language may be exaggerated, but it is supported in some measure by a statement we find in another part of the report, that in one commune of the department of the Meuse, 270 owners hold in all 832 hectares, which is divided into 5,348 different plots. This gives an average out of about 2,080 acres of *rather more than half an acre to each plot, and of two acres and two-thirds to each landowner*. At the same time, it is an error to attribute, as is commonly done, this state of things entirely to modern legislation. Documents in the hands of the commission show that subdivision was in full force in the sixteenth century.

“ The small holder who tills his land for the most part by his personal labour alone, undoubtedly secures to himself some substantial advantages. Acre for acre he produces more, and may so be said to be more successful (putting out of sight the amount of labour expended) than the larger owner. His untiring exertions are rewarded by a greater return than those of hired labour, and the dearness and scarcity of labour and general want of capital do not come so home to his class as to the classes above him. His conditions of life, like those of the agricultural class throughout Europe, have generally improved, and it is agreed on all hands that he is better housed, clad, and fed than he was thirty years ago. The commissioner, therefore, is probably correct in thinking subdivision, or diffusion of property in land, a guarantee for internal peace and a mark of general well-being; but at the same time he is alive to its concomitant evils. The complaints which crop up in the report may, in our opinion, and we strongly suspect in that of M. de Mornay, be fairly traced to the effects of this system of subdivision, which, as the commissioner says, is the keynote of the report. Various remedies and palliatives to check the further progress of subdivision were suggested in the course of the inquiry.

* “ *Rapport à S. E. M. Le Ministre Secrétaire d'Etat au Département de l'Agriculture, du Commerce, et des Travaux Publics.* (Paris: Imprimerie Impériale.)”

“ As the law stands at present, a parent has a power of disposition by will over but a small part of his property, varying in amount with the number of his children; but of the rest each child is entitled to have his equal share in specie. Thus a division of the goods to one and the land to another, though the shares may be equal in value, is voidable. Again, a division by a parent of his property in his lifetime, is voidable anytime within ten years from the death of the parent. Add to this that the jealousy of the agriculturist insists on dividing each patch of land of which the property may be composed, and the extreme subdivision ceases to be a marvel. From Puy de Dome comes a suggestion to give a power of disposition by will over the whole property. The new departments of Savoy regret the Sardinian code, by which the sons and daughters on the spot divide the land, while the absent get their shares in goods or money. In the south, ancient custom, in accordance with which the eldest son takes the land, indemnifying his co-heirs, being still in force, is a fruitful source of litigation. Others propose that the Legislature should forbid subdivision below a certain point, and, if necessary, compel a sale of the land.

“ The commissioners report that the equal division of property is still very popular, and that, therefore, none of these suggestions meet with universal approval, but that a law facilitating the exchange of contiguous plots at a diminished duty, would be generally acceptable. It is hoped, in this way, to remedy some of the evils of subdivision.

“ Where the parcels are so small, every furrow is valuable, and great quarrels arise from the indefiniteness of the boundaries. It is difficult, too, to provide sufficient means of access, as each owner is unwilling to cede any portion of his land for a road or path. One remedy proposed is to make a new survey by means of engineers, who shall have power to lay down the boundaries definitely; the expense, in part, is to be borne by Government. Where the experiment has been tried, though at a cost of 21 frs. a hectare ($2\frac{1}{2}$ acres), the results have been satisfactory.

“ Rents have generally risen even where the market value of the land has fallen. The reason given for this is that the farmers, having learnt no other means of livelihood, are compelled to accede to the terms imposed on them by the landlords. The commissioner remarks that if this were true, failures would have become more frequent among farmers; whereas, in the opinion of the commission, the condition of the farmers has improved. The solution of the problem would seem to be that a farmer gets a better return for his capital as tenant, than as landowner, and is therefore able and willing to pay for the privilege of being a tenant.

“ A general demand is made for longer leases: that in the absence of special agreement a lease shall be considered to be for twelve years, whereas by the present law a parol lease is only taken to be for so long a period as will allow the tenant to reap the fruits of the land demised; as in the case of a vineyard or meadow for one year, or in the case of arable land till the end of the course of crops.

“ Furthermore, they suggest a compensation clause, to be obligatory in every lease, by which the farmer, if his lease suddenly terminate, will be able to demand compensation for any unexhausted improvements. It appears, says the commissioner, that such a system exists in England, and its excellence is well established.”

VII.—*Church Schools in England and Wales, 1867.*

“ The Statistical Report presented to the National Society (Westminster), on the numerical state of Church Schools throughout the country, has just made its appearance. The information is made to fall into three sections, each of which is distinct in character. The first part of the Report is a general survey of the Parishes and other ecclesiastical districts of the country in reference to Church Schools. For example, we are at once informed how many parishes there are in England and Wales which have not parochial schools, but which are nevertheless

supplied with the means of education by Church Schools in adjoining parishes, this number being 1,355. Of course, it is not every parish which requires a separate school; for instance, each of the thirty-six parishes in Norwich does not need a distinct educational establishment. In Exeter, Colchester, York, Chichester, and other places there are large 'central' schools serving the wants of several parishes. Again, many little country parishes have too few inhabitants to need separate schools and teachers. In London, or rather the city portion of it, there are several sets of schools, and others termed 'ward' schools, which supply the educational requirements of several parochial districts. The framers of the Report have even gone into the question of *maximum* distance walked by the young persons who obtain their education in adjoining places. This distance varies. The proportions are as follows:—In the case of 383 parishes the distance which the children walk is less than a mile; in 250 parishes it is between a mile and a mile and a-half; in 201 it is between a mile and a half and two miles; in nine it is between two and a-half and three miles; in one it is between three and four miles. We are next told how many little parishes there are which have only cottage or dames' schools, and the populations of these parishes are shown. For example, it is interesting to know that of the 662 parishes which have such schools 16 per cent. have fewer inhabitants than 100, and 53 per cent. between 100 and 300. It is observed in the Report that in the dames' schools in small parishes the Church Catechism is taught, in addition to other subjects of a secular kind.

"The clergy often provide the books used. The children are sometimes taken to church. Where the population of a parish is very small the clergy find that a dame's or cottage school is the only one practicable. If the area of a parish is extensive and the population in it is much scattered they find that two or three such schools at different points are best adapted to the wants of the case. The young children, especially on stormy or wet days, or when the lanes are partly blocked up with snow, could not walk miles to a national school. When they become older they generally go for their education to an adjoining parish."

"We have, lastly, in Section 1 of this Report, a table which represents the 'educational destitution' of England and Wales, so far as such destitution attaches to Church of England Schools. It is very small, for there are only 338 parishes in the whole of England and Wales which are not provided for; and 7 per cent. have populations under 100, 28 per cent. between 100 and 300, 19 per cent. between 300 and 500, and 17 between 500 and 1,000.

"From Section 2 it appears that, among the 14,709 parishes, there are 11,972 institutions or schools held on *week-days*, and having on their registers 1,505,856 scholars, the average attendance being 1,081,268 scholars. In *parish or national week-day schools alone* the Church of England has 1 in 14 of the population of England and Wales; but if we include *night schools*, the proportion is 1 in 13. These night schools are serving a useful purpose; for example, at page 19 we are told that when 1,051 such schools, containing 41,252 scholars, were examined, 7 per cent. of the said scholars had never been to week-day schools. The Church of England has 11,747 Sunday-schools, containing 1,258,771 scholars. In the Church week-day schools there are 18,751 masters and mistresses, of whom 34·7 per cent. are *trained* and 42·2 per cent. *certificated*. Teachers actually in charge of schools, though, perhaps, not trained, are, by the provisions of the Revised Code, permitted to compete for Government certificates; hence more are certificated than trained.

"As to the *income* of the national or parochial schools, we find that it annually amounts to 1,615,557*l.* An income of 834,888*l.* was derived from its sources in the following proportions:—Endowments, 66,547*l.*; subscriptions and donations, 254,838*l.*; school-pence, 254,803*l.*; capitation grant from the State, 216,525*l.*; church collections, 42,175*l.* In the case of 2,939 schools the deficit in income, which their treasurers supplied, amounted to 52,777*l.*, or an average of 18*l.* for each treasurer to make up. But Church education, according to one of the tables, has advanced at a very rapid rate. Taking *week-day and night schools* together, it appears that in Church national and parochial schools, the proportion of scholars to the population of England and Wales was 1 in 36·7 in 1831, 1 in 32·1 in 1837,

1 in 17·5 in 1847, 1 in 15·5 in 1857, and 1 in 13 in 1867. The Report is a joint one, and is signed by Mr. Wilson and by Mr. John Flint, registrar of the Duke of Newcastle's Commission on Education."

VIII.—*The Statistics of the London Bankers' Clearing House for Two Complete Years, May, 1867, to May, 1869.*

THE following useful analysis is from the *Money Market Review* of 29th May, 1869. It must be remembered that the Clearing House figures only include one side of the account—that is to say, that the debits were in 1868-69, say 3,534 millions sterling, and were met by 3,534 millions of credits or contra items:—

"The Clearing House Returns have now been issued for two complete years, and it may be useful, in the present condition of the money market, to note the evidence they afford as regards the extent of mercantile and speculative activity since May, 1867, when their publication commenced.

"The total amount of the transactions settled by means of cheques and bills through the London Bankers' Clearing House for the year ending the 30th ult., reached the enormous sum of 3,534,039,000*l.*, while for the previous twelve months it was 3,257,411,000*l.*, so that the increase during the past year was 276,628,000*l.*, showing an improvement on the total volume of the transactions of about 8½ per cent.

"The *total clearances* on the fortnightly settling days in stocks and shares were, in the past twelve months, 550,622,000*l.*, being an increase on the preceding year of 106,179,000*l.*, or equal to nearly 24 per cent.; while the amount cleared, excluding those fortnightly account days in stocks and shares, was 2,983,417,000*l.*, being an increase of 170,449,000*l.*, or rather more than 6 per cent. on the corresponding days of the previous twelve months.

"These figures demonstrate that, whilst the business on *ordinary days* has augmented only 6 per cent., the transactions on the fortnightly account days on the Stock Exchange have advanced, proportionately, four times as much. In the following tables, however, the analysis of these important statistics for the last two years is rendered with more distinctness, thus not only enabling us to ascertain in what class of transactions the greatest increase has taken place, but to observe the gradual progress which has been made in each department. The figures record the *average daily clearances* during successive periods of four months each, the calculation being made on the total number of days on which the Clearing House was open for business. Each interval of the past twelve months—as well as the year itself—is contrasted with the corresponding period of the previous year, and it is worthy of remark, that in every instance business has increased.

"The following are the *average daily amounts cleared* in the respective periods, inclusive of all transactions settled:—

Four Months.	Cleared.	Four Months.	Cleared.	Increase.
	£		£	Per cent.
Ending Aug., 1868	10,958,000	Ending Aug., 1867	10,269,000	6·71
„ Dec., '68	11,014,000	„ Dec., '67	10,095,000	9·10
„ April, '69	12,137,000	„ April, '68	10,962,000	10·71
Year ending April, } 1869	11,363,000	Year ending April, } 1868	10,440,000	8·84

“ It will be observed that for the four months ending with December, 1867, the settlements were somewhat less than in the preceding four months, but a decided rebound was experienced in the succeeding period, and this was fairly supported until the end of 1868. During the four months ended April, 1869, the improvement, however, has been still more remarkable, the clearances being more than a million per day in excess of the previous period, and equal to an advance of $10\frac{3}{4}$ per cent. on the corresponding four months of 1868.

“ We will next proceed to analyse or classify the figures, in order to ascertain as nearly as possible the relative progress on *ordinary* clearing days, as well as on those which have a special character. The following are the *average clearances* on the fortnightly ‘account’ or ‘pay days’ for stocks and shares on the Stock Exchange:—

Four Months.	Daily Average.	Four Months.	Daily Average.	Increase.
	£		£	Per cent.
Ending Aug., 1868	21,587,000	Ending Aug., 1867	17,154,000	25·84
„ Dec., '68	22,662,000	„ Dec., '67	17,232,000	31·51
„ April, '69	24,579,000	„ April, '68	21,170,000	16·10
Year ending April, } 1869	22,943,000	Year ending April, } 1868	18,518,000	23·90

“ Stock Exchange business here shows an uninterrupted improvement in each interval since May, 1867. The greatest advance occurred in the four months ending with April, 1868, the settlements, as compared with either of the two preceding periods, having augmented by an average of nearly four millions per day ; these increased Clearances were, however, followed by further additions, and, in the first months of 1869 the daily average exceeded the average of the previous four months by nearly two millions, notwithstanding that the interval, ending with December, 1868, surpassed the summer period by an amount of more than a million per day. It must also be pointed out that the advance in the four months ended April, 1869, is all the more remarkable by reason of the new arrangement for settlements in foreign stocks, which came into operation at the end of December last, having considerably reduced the amount of the cheques cleared on ‘account days.’ Some evidence of the recent augmentation of Stock Exchange transactions is also observable in the next table, which gives the *average daily clearances* on the one day which followed the account day:—

Four Months.	Daily Average.	Four Months.	Daily Average.	Increase.
	£		£	Per cent.
Ending Aug., 1868	12,807,000	Ending Aug., 1867	11,316,000	13·17
„ Dec., '68	12,104,000	„ Dec., '67	11,414,000	6·04
„ April, '69	14,341,000	„ April, '68	12,480,000	14·91
Year ending April, } 1869	13,084,000	Year ending April, } 1868	11,736,000	11·49

“ As compared with *ordinary* days, given in our concluding table, these Stock Exchange ‘second days’ are important ones. During the last four months a large augmentation has taken place in the average. No doubt the expansion of business has caused a greater proportion of transactions to be left over for completion on these second days.

“ An estimate of the increased magnitude of the *speculation on the Stock*

Exchange may be gathered by contrasting the first and last periods in these tables. Thus the total of the daily averages of the two days above referred to in the four months ended April, 1869, amounts to 38,920,000*l.*, being 10,450,000*l.* in excess of the same days in the quarter ending August, 1867. As compared with the corresponding period of 1868, the increase is 5,270,000. The enlargement arises mainly from the late speculation in foreign stocks.

“We will next give the average *daily clearances* on the monthly ‘account days’ in consols:—

Four Months.	Daily Average.	Four Months.	Daily Average.	Increase.
	£		£	Per cent.
Ending Aug., 1868	10,896,000	Ending Aug., 1867	10,656,000	2·25
„ Dec., '68	11,053,000	„ Dec., '67	10,939,000	1·04
„ April, '69	12,272,000	„ April, '68	11,477,000	6·93
Year ending April, } 1869	11,272,000	Year ending April, } 1868	11,024,000	2·25

The variations in these amounts are not striking, but they exhibit an improving tendency.

“Another special and interesting feature of the returns issued by the Clearing House refers to the 4th of the month, or the day on which bills in connection with so many branches of our *Home trade* fall due. The following are the daily average clearances on ‘inland bills’ days:—

Four Months.	Daily Average.	Four Months.	Daily Average.	Increase.
	£		£	Per cent.
Ending Aug., 1868	12,527,000	Ending Aug., 1867	12,361,000	1·34
„ Dec., '68	13,652,000	„ Dec., '67	11,829,000	15·41
„ April, '69	14,286,000	„ April, '68	12,588,000	13·49
Year ending April, } 1869	13,488,000	Year ending April, } 1868	12,259,000	10·02

A satisfactory and welcome improvement is also observable in this table.

“Our next and concluding figures show the *average daily clearances* on what are simply *ordinary days*—that is, exclusive of the special days noticed in the foregoing tables. By this means we may form an estimate of the relative progress of the general business of the country:—

Four Months.	Daily Average.	Four Months.	Daily Average.	Increase.
	£		£	Per cent.
Ending Aug., 1868	9,666,000	Ending Aug., 1867	9,374,000	3·11
„ Dec., '68	9,607,000	„ Dec., '67	9,108,000	5·48
„ April, '69	10,562,000	„ April, '68	9,667,000	9·25
Year ending April, } 1869	9,942,000	Year ending April, } 1868	9,383,000	5·96

“This table refers in no way to Stock Exchange business, and it is gratifying to observe an increase in general business operations. The early months of 1868

showed an advance on the last four months of 1867, represented by increased clearances averaging 559,000*l.* per day, the improvement being just over 6 per cent. This higher range was maintained throughout 1868, and has been followed in the first four months of 1869 by a further extension of transactions, the average daily amounts cleared having exceeded those of the four months ending in December last by 925,000*l.*, or $9\frac{1}{4}$ per cent. The relative increase during each interval of the past twelve months, as given in the last column, has been gradual and progressive."

IX.—*The Railways of America.*

"In an interesting article on this subject, the *New York Times* says:—

"There were in operation in all the States, on the 1st day of January, 1869, 42,255 miles of line, the cost of which, at \$44,000 per mile, equalled \$1,800,000,000. The total amount of net tonnage transported over them for the year equalled 75,000,000 tons, having a value of \$10,472,250,000—a sum equalling six times their cost, and more than four times greater than the whole amount of the national debt. The construction of these works upon a grand scale commenced with the discovery of gold in California, in 1848. The number of miles in operation in the country, on the 1st day of January of that year, was 5,599. The mileage annually constructed from the opening of the first section (23 miles) of the Baltimore and Ohio Railroad in 1830, to 1847 inclusive, equalled 311 miles. The yearly average opened from 1848 to 1860, inclusive, equalled 1,925 miles—the aggregate opened in this period being 25,037 miles. During the war the number of miles built equalled 3,273, or 818 miles annually. Since 1864, 8,347 miles have been opened, or 2,086 miles annually. The number of miles opened the past year equalled 2,979 miles. There are in progress fully 15,000 miles of line, of which at least 5,000 miles will be opened the present year. The ratio of mileage of these works to our total population is as 1 of the former to 876 of the latter. The ratio in the New England States is as 1 to 846; in the middle, 1 to 1,037; in the southern, 1 to 969; and in the western, 1 to 731. The State of New Hampshire has 1 mile of railroad to 500 inhabitants; the State of Nebraska, 1 to 163; and the State of Florida, 1 to 343. The State having the largest proportionate mileage is Massachusetts, which has 1 mile of road to 5.47 square miles of area. The State of Ohio has 1 mile of line to 11.76 square miles. A ratio similar to that for Massachusetts would give to the whole country 600,000 miles of line. One similar to that for Ohio, 300,000 miles. While such results are by no means to be realised for a long time to come, it is safe to predict that upon an area equalling 1,250,000 square miles of territory, railroads will be speedily built to an extent that will give, for such an area, the average for Ohio. Such a rate would call for only about double the mileage at present in operation. But rapid as has been the progress of these works, the extent of their tonnage traffic and the rapidity of its development are matters of still greater wonder. Vast as is this traffic, it dates almost wholly from 1851, the year in which the Erie Railroad was opened and the canal tolls removed from freight transported over the New York Central line. The total amount of net tonnage transported over all the railroads of the United States for

that year did not exceed 5,500,000 tons. The rate of increase from that year to the close of 1867, in which year 75,000,000 of tons were transported, exceeded 1,300 per cent. The tonnage traffic of all the roads in the country in 1858 equalled 18,750,000 tons. The increase in the decade commencing with this year consequently equalled 300 per cent. The tonnage of the railroads of the State of New York, for example, in 1858, equalled 3,473,725 tons; in 1867, 10,343,681 tons. In the mean there was only a very small addition to the mileage of the State. The traffic of the railroads of the other States showed a still more rapid increase. In the same period more than 12,000 miles of new line were opened. By adding the traffic of these lines to that of those previously in operation, the estimated rate of increase of 300 per cent. for the decade is fully sustained. The value of the tonnage for 1867 is estimated to equal that of the several classes of freight transported on the Erie Canal for that year (the value of which is carefully ascertained), or \$139'63 per ton. The aggregate value of the tonnage of all the roads equalled, consequently, the enormous sum of \$10,472,250,000. At a similar estimate, the value of the tonnage transported in 1851 equalled \$765,236,725; in 1858, \$3,096,762,500. The total increase in value of the tonnage transported in 1867 over that transported in 1851 equalled \$9,707,013,275, and \$7,375,487,500 over that transported in 1858. Incredible as would seem to be such results, their correctness is demonstrated beyond cavil. It is shown that the railroads transport, on an average, 2,000 tons to the mile. The tonnage of the railroads of Massachusetts, for 1867, equalled 5,394,137 tons, or 3,853 tons to the mile. That of the railroads of New York equalled 10,343,681 tons, or 3,501 tons to the mile. That of the railroads of Pennsylvania equalled 35,383,370 tons, or 7,864 tons to the mile. The tonnage borne on the railroads of those States having a mileage of 8,750 miles, equalled 51,121,140 tons, or 5,826 tons to the mile. The tonnage of most of the great roads far exceeded the estimate. The aggregate amount transported could not have been less than 100,000,000 tons. The total earnings of all the roads in the United States in 1851 equalled \$39,406,358. The receipts from freight and passengers were almost exactly balanced. The earnings from all sources in 1867 were \$400,000,000, of which \$280,000,000 were received from freight, and \$120,000,000 from passengers. The rapid increase of earnings from freight is a most favourable feature. The earnings of the English railways in 1851 were \$73,000,000, of which \$35,000,000 were from freight, and \$38,000,000 were from passengers. In 1867 their total earnings were \$190,000,000, of which \$105,000,000 were from freight, and \$85,000,000 from passengers. The ratio, in this country, of earnings from freight to earnings from passengers is as 2'2 to 1; in England is a little over 1'1 to 1. The earnings of American roads are more than twice greater than those of England. The railroad mileage of that country in 1867 was 14,247; in the United States, 39,276. The cost of the former equalled very nearly \$2,500,000,000, that of the railroads of the United States, for the same year, \$1,700,000,000. The earnings of the English roads upon their cost, equalled 7'86 per cent.; those of the United States very nearly 25 per cent. The English roads, however, have a great advantage over our own in operating expenses, their net earnings, as a rule, fully equalling one-half of the gross receipts. In this country the net cannot be estimated at over 30 per cent. of the receipts. The following statement presents in detail the various items entering into the cost of operating the railways of the two countries, the railroads of the State of New York being taken as representing those of our own:—

Items of Cost per Train, Mileage of Running Trains upon the Railroads
of New York and Great Britain, for 1867.

	New York,	Great Britain.
	Cents.	Cents.
Maintenance of way, including iron	49·50	12·70
Repairs of engines and material	17·35	6·45
Repairs of cars	21·18	6·74
Wages of engineers and firemen	8·36	3·00
Fuel	22·60	3·42
Local taxes	5·50	2·20
All other charges	42·62	26·86
Total	166·00	61·37

The preceding statement shows that the cost per mile of operating the railroads of the State of New York to be two and a-half times greater than that of operating the railways of Great Britain. The earnings of our roads, however, per mile run, are nearly twice greater—the average earnings of the former being \$1 25c. per mile; of the latter, about \$2 30c. per mile. The most startling difference in the items of cost is in the matter of fuel, the cost of the same in America being 21·60 per mile; in England 3·42 per mile. Coke is almost exclusively used upon English roads, upon our own wood or raw coal; the former is a very expensive fuel, while the latter is very destructive to the engine.”

*** Taken as reprinted in the *Manchester Guardian*,

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED DECEMBER, 1868.

BIRTHS AND DEATHS—QUARTER ENDED MARCH, 1869.

A.—*Serial Table of MARRIAGES, BIRTHS, and DEATHS, returned in the Years 1863-69, and in the QUARTERS of those Years.*

Calendar YEARS, 1863-69 :—Numbers.

Years	'69.	'68.	'67.	'66.	'65.	'64.	'63.
Marriages No.	—	176,729	179,154	187,776	185,474	180,387	173,510
<i>Births</i> „	—	786,156	768,349	753,870	748,069	740,275	727,417
Deaths „	—	480,677	471,073	500,689	490,909	495,531	473,837

QUARTERS of each Calendar Year, 1863-69.

(I.) MARRIAGES :—*Numbers.*

<i>Qrs. ended last day of</i>	'69.	'68.	'67.	'66.	'65.	'64.	'63.
March..... No.	—	36,670	36,441	37,579	36,807	37,988	35,528
June „	—	45,226	45,589	48,577	45,827	44,599	44,146
September „	—	43,480	44,086	46,257	45,852	44,675	41,932
December „	—	51,353	53,038	55,363	56,988	53,125	51,904

(II.) BIRTHS :—*Numbers.*

<i>Qrs. ended last day of</i>	'69.	'68.	'67.	'66.	'65.	'64.	'63.
March..... No.	204,055	198,594	194,763	196,753	194,130	192,947	186,341
June „	—	202,892	199,660	192,437	192,988	188,835	189,340
September „	—	192,467	190,782	179,086	181,941	181,015	173,439
December „	—	192,203	183,144	185,594	179,010	177,478	178,297

(III.) DEATHS :—*Numbers.*

<i>Qrs. ended last day of</i>	'69.	'68.	'67.	'66.	'65.	'64.	'63.
March..... No.	133,437	120,095	134,008	138,136	140,410	142,977	128,096
June „	—	109,984	112,355	128,551	115,892	116,880	118,121
September „	—	130,502	108,513	116,650	113,362	112,223	112,504
December „	—	120,096	116,197	117,352	121,245	123,451	115,116

Annual Rates per 1,000 of PERSONS MARRIED, and of BIRTHS, and DEATHS, during the Years 1863-69, and the QUARTERS of those Years.

Calendar YEARS, 1863-69:—General Percentage Results.

YEARS.....	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
Estmtd. Popln. of England in thousands in middle of each Year....	21,870	—	21,649	21,430	21,210	20,991	20,772	20,554
Persons Married Per ct.	—	16·92	16·32	16·72	17·70	17·68	17·36	16·88
Births „	—	35·34	36·31	35·85	35·54	35·64	35·64	35·39
Deaths.... „	—	22·48	22·20	21·98	23·61	23·39	23·86	23·05

QUARTERS of each Calendar Year, 1863-69.

(I.) PERSONS MARRIED :—*Percentages.*

<i>Qrs. ended last day of</i>	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
March Per ct.	—	14·09	13·64	13·84	14·42	14·28	14·72	14·08
June..... „	—	17·20	16·78	17·08	18·40	17·54	17·24	17·26
Septmbr. „	—	16·37	15·92	16·30	17·28	17·32	17·04	16·16
Decembr. „	—	19·89	18·76	19·56	20·64	21·46	20·22	19·96

(II.) BIRTHS :—*Percentages.*

<i>Qrs. ended last day of</i>	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
March Per ct.	37·98	36·85	36·94	37·00	37·77	37·65	37·40	36·91
June..... „	—	36·65	37·64	37·42	36·44	36·92	36·51	37·00
Septmbr. „	—	34·04	35·23	35·28	33·46	34·34	34·53	33·43
Decembr. „	—	33·79	35·09	33·78	34·58	33·70	33·76	34·28

(III.) DEATHS :—*Percentages.*

<i>Qrs. ended last day of</i>	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
March Per ct.	24·84	25·36	22·34	25·46	26·52	27·23	27·72	25·38
June..... „	—	22·03	20·40	21·06	24·34	22·17	22·60	23·08
Septmbr. „	—	20·63	23·89	20·06	21·79	21·40	21·41	21·69
Decembr. „	—	21·90	21·93	21·43	21·87	22·83	23·49	22·13

B.—*Comparative Table of CONSOLS, PROVISIONS, PAUPERISM, and TEMPERATURE in each of the Nine QUARTERS ended March, 1869.*

1	2	3	4	5	6	7	8	9
Quarters ending	Average Price of Consols (for Money).	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the <i>Mean</i> Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism.		Mean Tem- pera- ture.
			Beef.	Mutton.		Quarterly Average of the Number of Paupers relieved on the <i>last day</i> of each week.		
						In-door.	Out-door.	
1867	£	<i>s. d.</i>	<i>d. d. d.</i>	<i>d. d. d.</i>	<i>s. s. s.</i>			°
Mar. 31	90 $\frac{7}{8}$	60 7	4 $\frac{3}{4}$ —7 5 $\frac{7}{8}$	5—7 $\frac{1}{4}$ 6 $\frac{1}{8}$	115—160 137	148,280	834,681	38·9
June 30	92 $\frac{4}{8}$	63 11	4 $\frac{3}{4}$ —6 $\frac{3}{4}$ 5 $\frac{3}{4}$	5 $\frac{1}{4}$ —7 $\frac{1}{4}$ 6 $\frac{1}{4}$	135—175 155	134,233	779,158	53·5
Sept. 30	94 $\frac{4}{8}$	65 4	4 $\frac{3}{4}$ —6 $\frac{3}{4}$ 5 $\frac{3}{4}$	5—7 6	100—155 127	129,860	743,965	59·7
Dec. 31	94 $\frac{3}{8}$	67 11	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	4 $\frac{1}{2}$ —6 $\frac{1}{2}$ 5 $\frac{1}{2}$	110—155 132	145,886	771,754	42·5
1868								
Mar. 31	93	72 2	4 $\frac{1}{4}$ —6 $\frac{1}{2}$ 5 $\frac{3}{8}$	4 $\frac{1}{4}$ —6 $\frac{1}{2}$ 5 $\frac{3}{8}$	125—170 147	159,716	860,165	41·4
June 30	94 $\frac{3}{8}$	71 10	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	4 $\frac{3}{4}$ —7 5 $\frac{7}{8}$	130—170 150	142,588	800,944	55·8
Sept. 30	94 $\frac{2}{8}$	59 1	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	4 $\frac{3}{4}$ —6 $\frac{3}{4}$ 5 $\frac{3}{4}$	120—175 147	138,284	778,804	63·9
Dec. 31	94 $\frac{3}{8}$	51 11	4 $\frac{1}{2}$ —7* 5 $\frac{3}{4}$	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ * 5 $\frac{5}{8}$	70—140 105	152,733	797,546	45·1
1869								
Mar. 31	92 $\frac{7}{8}$	50 2	4 $\frac{3}{4}$ —7 $\frac{1}{4}$ * 6	4 $\frac{3}{4}$ —7 $\frac{1}{2}$ * 6 $\frac{1}{8}$	70—140 105	164,048†	843,593†	41·3

* For the last four weeks of the quarter, ending 31st December, 1868, and for the first quarter of 1869, the prices, from which the quarterly average is derived, are those quoted at the Smithfield Meat Market.

† These figures represent the average number of paupers relieved on the last day of each week in January, the pauperism returns not being complete for the subsequent months.

C.—*General Average Death-Rate Table:—Annual Rate of Mortality to 1,000 of the Population in the Eleven Divisions of England.*

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years. 1851-60.	1868.					1869.
		Year.	Winter Quarter.	Spring Quarter.	Summer Quarter.	Autumn Quarter.	
I. London	23·63	23·57	23·29	21·88	24·58	24·52	25·43
II. South-Eastern counties ...	19·55	18·91	19·14	17·01	21·18	18·31	21·39
III. South Midland „ ...	20·44	19·81	20·01	17·13	23·08	19·00	21·92
IV. Eastern counties	20·58	19·57	19·43	18·05	21·48	19·31	22·42
V. South-Western counties ...	20·01	18·12	20·21	16·94	17·04	18·29	21·77
VI. West Midland „ ...	22·35	21·05	21·31	19·19	23·29	20·39	23·58
VII. North Midland „ ...	21·10	21·26	20·59	19·89	24·09	20·48	24·35
VIII. North-Western „ ...	25·51	26·14	26·31	23·92	28·80	25·54	28·13
IX. Yorkshire	23·09	24·66	22·53	22·51	27·99	25·60	28·08
X. Northern counties	21·99	24·12	24·80	21·95	25·35	24·39	26·05
XI. Monmouthshire and Wales	21·28	19·70	22·12	19·89	18·45	18·35	23·12

Note.—The mortality for the year 1868 is the mean of the quarterly rates.

D.—*Special Average Death-Rate Table*:—ANNUAL RATE of MORTALITY per 1,000 in TOWN and COUNTRY DISTRICTS of ENGLAND in each Quarter of the Years 1869-67.

	Area in Statute Acres.	Population Enumerated. 1861.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
				1869.	Mean '59-68.	1868.	1867.
In 142 Districts, and 56 Sub-districts, comprising the <i>Chief Towns</i>	3,287,151	10,930,841	March ..	26·55	27·24	24·03	27·23
			June	—	23·39	22·20	21·99
			Sept.	—	22·90	26·49	22·47
			Dec.	—	24·31	24·15	23·92
			Year	—	24·46	24·22	23·90
In the remaining Districts and Sub- districts of Eng- land and Wales, comprising chiefly <i>Small Towns</i> and <i>Country Parishes</i> }	34,037,732	9,135,383	Year	—	20·00	19·40	19·54
			March ..	22·56	23·02	20·12	23·16
			June	—	20·32	18·04	19·84
			Sept.	—	17·79	20·44	16·93
			Dec.	—	18·88	18·98	18·21

Note.—The three months, January, February, March, contain 90, in leap year 91 days; the three months, April, May, June, 91 days; each of the last two quarters of the year 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 365·25 days, and 366 and 365·25 days in leap year.

E.—*Special Town Table*:—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE and RAINFALL in last Winter Quarter, in Fourteen Large Towns.

Cities, &c.	Estimated Population in the Middle of the Year 1869.	Births in 13 Weeks ending 3rd April, 1869.	Deaths in 13 Weeks ending 3rd April, 1869.	Annual Rate to 1,000 Living during the 13 Weeks ending 3rd April.		Mean Temperature in 13 Weeks ending 3rd April, 1869.	Rainfall in Inches in 13 Weeks ending 3rd April, 1869.
				Births.	Deaths.		
Total of 14 large towns....	6,546,587	61,978	45,121	37·99	27·66	41·2	7·52
London	3,170,754	29,623	20,088	37·49	25·43	41·2	6·62
Bristol (city)	169,423	1,639	1,123	38·83	26·60	42·1	9·77
Birmingham (borough)....	360,846	3,456	1,861	38·44	20·70	41·7	7·79
Liverpool (borough)	509,052	4,909	3,756	38·71	29·61	42·0	5·69
Manchester (city)	370,892	3,533	2,862	38·23	30·97	—	—
Salford (borough)	119,350	1,174	826	39·48	27·78	41·3	8·12
Sheffield (borough)	239,752	2,456	1,753	41·12	29·35	40·7	7·60
Bradford (borough)	138,522	1,308	927	37·90	26·86	—	—
Leeds (borough).....	253,110	2,701	1,737	42·83	27·54	42·9	6·77
Hull (borough)	126,682	1,064	830	33·71	26·30	39·1	6·12
Newcastle - on - Tyne (borough)	130,503	1,348	989	41·46	30·42	38·7	6·15
Edinburgh (city)	178,002	1,737	1,464	39·17	33·01	40·0	6·70
Glasgow (city)	458,937	4,739	4,582	41·45	40·07	41·1	11·19
Dublin (city and some suburbs)	320,762	2,291	2,323	28·67	29·07	43·6	7·73
	(1867.)						
Berlin	702,437	7,779	5,812	44·45	33·21	38·3	—
	(1863.)						
Vienna.....	560,000	—	4,777	—	34·24	36·6	—

F.—*Divisional Table*.—MARRIAGES Registered in Quarters ended 31st December, 1868-66; and BIRTHS and DEATHS in Quarters ended 31st March, 1869-67.

1 DIVISIONS. (England and Wales.)	2 AREA in Statute Acres.	3 POPULATION, 1861. (Persons.)	4 5 6 MARRIAGES in Quarters ended 31st December.		
			1868.	1867.	1866.
			No.	No.	No.
ENGLD. & WALES....Totals	37,324,883	20,066,224	51,353	53,038	55,363
I. London	77,997	2,803,989	8,158	8,527	9,103
II. South-Eastern	4,065,935	1,847,661	4,601	4,780	4,982
III. South Midland	3,201,290	1,295,515	3,114	3,350	3,362
IV. Eastern	3,214,099	1,142,562	2,958	3,092	3,121
V. South-Western	4,993,660	1,835,714	3,525	3,661	3,824
VI. West Midland	3,862,732	2,436,116	6,089	6,100	6,386
VII. North Midland	3,543,397	1,289,380	3,206	3,264	3,313
VIII. North-Western	2,000,227	2,935,540	7,847	8,052	8,653
IX. Yorkshire	3,654,636	2,015,541	5,737	5,905	6,129
X. Northern	3,492,322	1,151,372	3,057	3,004	3,013
XI. Monmthsh. & Wales	5,218,588	1,312,834	3,061	3,297	3,477

7 DIVISIONS. (England and Wales.)	8 9 10 BIRTHS in Quarters ended 31st March.			11 12 13 DEATHS in Quarters ended 31st March.		
	1869.	1868.	1867.	1869.	1868.	1867.
	No.	No.	No.	No.	No.	No.
ENGLD. & WALES....Totals	204,055	198,594	194,763	133,437	120,095	134,008
I. London	29,623	29,891	28,933	20,088	18,144	20,212
II. South-Eastern	17,975	17,450	17,353	10,762	9,611	10,732
III. South Midland	12,635	11,979	12,053	7,274	6,681	7,903
IV. Eastern	10,228	9,961	10,061	6,441	5,630	6,369
V. South-Western	15,336	14,893	15,136	9,992	9,365	10,891
VI. West Midland	24,973	23,850	24,424	15,706	14,162	15,697
VII. North Midland	12,372	12,208	11,749	8,103	6,887	7,705
VIII. North-Western	32,515	31,872	30,277	23,179	21,562	23,455
IX. Yorkshire	21,990	21,602	20,477	15,324	12,283	14,196
X. Northern	13,451	12,851	12,597	8,467	8,012	8,546
XI. Monmthsh. & Wales	12,957	12,037	11,703	8,101	7,758	8,302

REMARKS on the WEATHER during the QUARTER ended 31st March, 1869. By JAMES GLAISHER, Esq., F.R.S., &c., President of the Meteorological Society.

The mean temperature of January was 41°·1, being 4°·9 higher than the average of ninety-eight years, higher than the corresponding temperatures in 1867 by 6°·9, and in 1868 by 3°·9, but lower than in 1866, when 42°·6 was recorded.

The mean temperature of February was 45°·3, being 6°·9 higher than the average of ninety-eight years, and with the sole exception of 1779, when the same temperature was recorded, higher than the corresponding values in any year in the period 1771-1868.

The mean temperature of March was 37°·5, being 3°·5 lower than the average of the preceding ninety-eight years, and 6°·5 colder than in 1868.

G.—General Meteorological Table, Quarter ended March, 1869.

[Abstracted from the particulars supplied to the Registrar-General by JAMES GLAISHER, Esq., F.R.S., &c.]

1869. Months.	Temperature of									Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.		
	Air.			Evaporation.		Dew Point.		Air— Daily Range.						Water of the Thames
	Mean.	Diff. from Aver- age of 98 Years.	Diff. from Aver- age of 28 Years.	Mean.	Diff. from Aver- age of 28 Years.	Mean.	Diff. from Aver- age of 28 Years.	Mean.	Diff. from Aver- age of 28 Years.	Mean.	Diff. from Aver- age of 28 Years.	Mean.	Diff. from Aver- age of 28 Years.	
Jan. ...	41·1	+4·9	+3·0	39·6	+2·8	37·6	+2·7	9·5	−0·2	40·7	·225	+·023	2·6	+0·2
Feb. ...	45·3	+6·9	+6·2	43·1	+5·7	40·6	+5·7	12·1	+0·7	45·1	·253	+·048	2·9	+0·5
March...	37·5	−3·5	−4·1	35·4	−3·9	32·4	−4·0	12·5	−2·1	40·7	·184	−·032	2·1	−0·4
Mean ...	41·3	+2·8	+1·7	39·4	+1·5	36·9	+1·5	11·4	−0·5	42·2	·221	+·013	2·5	+0·1

1869. Months.	Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Amnt.	Diff. from Average of 54 Years.		Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
										At or below 30°.	Between 30° and 40°.	Above 40°.		
Jan. ...	88	0	In. 29·861	+·115	Gr. 553	— 1	In. 2·9	+1·1	Miles. 284	9	18	4	20·2	42·7
Feb. ...	84	— 1	29·807	+·008	547	— 6	2·3	+0·7	415	6	13	9	27·1	44·1
March...	83	+ 1	29·632	—·114	553	+ 3	1·4	—0·2	340	18	13	0	20·4	34·6
Mean ...	85	0	29·767	+·003	551	— 1	Sum 6·6	Sum +1·6	Mean 346	Sum 33	Sum 44	Sum 13	Lowest 20·2	Highest 44·1

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

H.—*Special Meteorological Table, Quarter ended 31st March, 1869.*

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermo- meter.	Lowest Reading of the Thermo- meter.	Range of Tem- perature in the Quarter.	Mean Monthly Range of Tem- perature.	Mean Daily Range of Tem- perature.	Mean Tem- perature of the Air.	Mean Degree of Hu- midity.
	in.	°	°	°	°	°	°	
Guernsey	29·735	55·0	31·0	24·0	21·0	7·4	44·4	86
Osborne	29·731	63·2	24·3	38·9	33·8	15·1	42·6	89
Barnstaple	29·676	62·0	30·0	32·0	26·0	9·6	45·3	87
Royal Observatory	29·722	61·6	26·3	35·3	28·6	11·3	41·3	85
Royston	29·730	57·7	22·9	34·8	29·0	11·9	40·8	87
Lampeter	29·709	60·0	22·0	38·0	33·3	11·4	42·7	87
Norwich	29·709	58·2	25·0	33·2	27·5	10·0	40·9	87
Derby	29·663	57·0	24·0	33·0	27·3	10·2	40·9	87
Liverpool	29·653	61·7	28·2	33·5	25·0	9·6	41·8	86
Stonyhurst	29·650	57·5	26·7	30·8	24·7	9·5	41·1	86
Leeds	—	60·0	24·0	36·0	29·0	12·8	42·0	78
North Shields ...	29·693	59·0	26·6	32·4	28·4	11·9	40·8	82

10	11	12	13	14	15	16	17	18
NAMES OF STATIONS.	WIND.					Mean Amount of Cloud.	RAIN.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount collected.
		N.	E.	S.	W.			
								in.
Guernsey	1·8	6	6	9	9	6·1	49	9·9
Osborne	0·9	6	5	10	9	7·7	42	8·8
Barnstaple	1·3	7	4	9	10	4·4	51	10·1
Royal Observatory	0·9	5	5	10	10	7·4	44	6·6
Royston	—	7	3	11	9	7·3	55	6·5
Lampeter	0·7	6	6	9	9	7·6	46	14·5
Norwich	—	6	5	12	7	—	36	8·1
Derby	—	6	5	9	10	—	51	6·5
Liverpool	1·5	4	8	9	9	7·2	54	5·7
Stonyhurst	—	5	6	10	9	7·8	72	13·9
Leeds	1·9	6	6	9	9	7·2	51	6·4
North Shields ...	1·8	6	4	8	12	5·7	47	4·9

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER

ENDED 31ST MARCH, 1869.

I.—Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population, Estimated to the Middle of each Year, during each Quarter of the Years 1869-65 inclusive.

	1869.		1868.		1867.		1866.		1865.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	28,429	3·54	28,736	3·60	27,969	3·52	28,883	3·66	28,594	3·65
Deaths	20,431	2·54	18,036	2·26	19,981	2·51	19,095	2·42	20,804	2·65
Marriages ..	5,291	0·66	5,287	0·66	5,332	0·66	5,642	0·71	5,416	0·69
Mean Temperature }	40°·0		40°·6		36°·5		38°·0		35°·3	
2nd Quarter—										
Births	—	—	31,025	3·89	30,393	3·83	29,808	3·78	30,318	3·86
Deaths	—	—	16,928	2·12	17,464	2·20	18,575	2·35	17,074	2·17
Marriages ..	—	—	5,660	0·71	5,602	0·70	6,034	0·76	5,707	0·72
Mean Temperature }	—		51°·0		49°·0		49°·3		51°·5	
3rd Quarter—										
Births	—	—	28,393	3·56	27,888	3·51	27,204	3·45	27,306	3·48
Deaths	—	—	16,662	2·09	15,106	1·90	15,470	1·95	15,924	2·02
Marriages ..	—	—	4,804	0·59	5,947	0·63	5,104	0·64	5,343	0·68
Mean Temperature }	—		57°·4		55°·2		54°·4		57°·5	
4th Quarter—										
Births	—	—	27,519	3·45	27,865	3·51	27,772	3·52	26,852	3·42
Deaths	—	—	17,760	2·22	16,473	2·07	18,210	2·30	17,089	2·17
Marriages ..	—	—	6,202	0·77	6,540	0·82	6,908	0·87	7,145	0·91
Mean Temperature }	—		41°·5		42°·3		43°·5		43°·4	
Year—										
Population.	—		3,188,125		3,170,769		3,153,413		3,136,057	
Births	—	—	115,673	3·63	114,115	3·59	113,667	3·60	113,070	3·60
Deaths	—	—	69,386	2·17	69,024	2·14	71,350	2·26	70,891	2·26
Marriages ..	—	—	21,853	0·68	22,521	0·70	23,688	0·75	23,611	0·75

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending 31st March, 1869, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

	Population.		Total Births.			Illegitimate Births.		
	Census, 1861.	Estimated to Middle of 1869.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,205,481	28,429	3·54	28	2,940	10·3	9·6
131 town districts	1,615,475	1,780,372	17,343	3·89	25	1,727	9·9	10·0
885 rural „	1,446,819	1,425,109	11,086	3·11	32	1,213	10·9	9·0

	Population.		Deaths.			Marriages.		
	Census, 1861.	Estimated to Middle of 1869.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,205,481	20,431	2·54	39	5,291	0·66	151
131 town districts	1,615,475	1,780,372	13,669	3·07	32	3,562	0·80	124
885 rural „	1,446,819	1,425,109	6,762	1·89	53	1,729	0·48	206

Note.—The constitution of several of the districts was altered on January 1, 1868; consequently the numbers of the population in the town and rural districts differ somewhat from those of previous years.

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 31st March, 1869.*

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	10·3						
Northern	8·0	Shetland ...	4·1	Forfar	12·2	Lanark	9·2
North-Western	6·8	Orkney	4·9	Perth	10·9	Linlithgow.	8·7
North-Eastern	15·4	Caithness ...	12·8	Fife	7·3	Edinburgh.	9·3
East Midland..	10·6	Sutherland...	4·7	Kinross	16·1	Haddington	11·2
West Midland.	8·1	Ross and }	4·1	Clackman- }	11·9	Berwick ...	12·5
South-Western	9·0	Cromarty }		nan		Peebles	10·8
South-Eastern.	9·7	Inverness ...	9·6	Stirling	8·4	Selkirk	8·6
Southern	17·0	Nairn	19·2	Dumbarton ..	6·1	Roxburgh ..	16·2
		Elgin	14·5	Argyll	8·7	Dumfries ...	18·0
		Banff	20·6	Bute	12·4	Kirkcud- }	13·9
		Aberdeen ...	14·2	Renfrew	7·5	bright .. }	
		Kincardine...	15·6	Ayr	9·9	Wigtown ...	19·3

IV.—*Divisional Table:—MARRIAGES, BIRTHS, and DEATHS Registered in the Quarter ended 31st March, 1869.*

1	2	3	4	5	6
DIVISIONS. (Scotland)	AREA in Statute Acres.	POPULATION, 1861. (Persons.)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
SCOTLAND Totals	19,639,377	3,062,294	5,291	28,429	20,431
I. Northern	2,261,622	130,422	167	664	550
II. North-Western	4,739,876	167,329	243	1,056	845
III. North-Eastern	2,429,594	366,783	443	3,122	1,981
IV. East Midland	2,790,492	523,822	840	4,620	3,197
V. West Midland	2,693,176	242,507	328	2,010	1,350
VI. South-Western	1,462,397	1,008,253	2,214	11,383	8,669
VII. South-Eastern	1,192,524	408,962	817	4,013	2,797
VIII. Southern	2,069,696	214,216	239	1,561	1,042

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY of MARRIAGES, in the Quarter ended 31st December, 1868;
and BIRTHS and DEATHS, in the Quarter ended 31st March, 1869.

COUNTRIES.	[000's omitted].		Marriages.	Per 1,000 of Popu- lation.	Births.	Per 1,000 of Popu- lation.	Deaths.	Per 1,000 of Popu- lation.
	Area in Statute Acres.	Popu- lation, 1861. (Persons.)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales	37,325,	20,066,	51,353	2·6	204,055	10·2	133,437	6·7
Scotland	19,639,	3,062,	6,202	2·0	28,429	9·2	20,431	6·7
Ireland	20,322,	5,799,	5,934	1·0	38,610	6·6	26,408	4·5
GREAT BRITAIN AND IRELAND }	77,286,	28,927,	63,489	2·2	271,094	9·4	180,276	6·3

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios are much under those of England and Scotland.—
ED. S. J.

I.—General Summary of the Quantity and Value of the Mineral Production of the United Kingdom, Average of the Ten Years, 1858-67; also 1866 and 1867 separately. (See ante, p. 215.)

[000's omitted, thus 86,567, = 86,567,000.]

Minerals.	Average of Ten Years, 1858-67.		Year ended 1866.		Year ended 1867.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
Coal	86,567,	21,542,	101,631,	25,408,	104,500,	26,125,
Iron	8,748,	2,851,	9,665,	3,119,	10,021,	3,210,
Tin	13,	798,	15,	732,	14,	695,
Copper	212,	1,164,	180,	759,	159,	700,
Lead	92,	1,221,	91,	1,161,	93,	1,158,
Zinc	136,	37,	13,	43,	13,	41,
Pyrites	115,	72,	135,	78,	117,	67,
Miscellaneous minerals	—	1,223,	—	1,525,	—	2,173,
	—	28,908,	—	32,825,	—	34,169,

II.—Quantity and Value of the COAL produced in the United Kingdom, Average of the Ten Years, 1858-67; also 1865, 1866, and 1867 separately.

[000's omitted throughout.]

	Average of Ten Years, 1858-67.	1865.	1866.	1867.
	Tons.	Tons.	Tons.	Tons.
United Kingdom	86,563,	98,151,	101,631,	104,500,
<i>Whereof related to—</i>				
Durham and Northumberland....	20,910,	25,033,	25,195,	24,867,
Cumberland	1,286,	1,431,	1,490,	1,513,
Yorkshire	9,170,	9,355,	9,715,	9,844,
Derbyshire	6,066, {	4,596,	4,750,	4,551,
Nottinghamshire		1,095,	1,601,	1,575,
Leicestershire		965,	867,	1,150,
Warwickshire	654,	859,	775,	881,
Staffordshire and Worcestershire	9,159,	12,201,	12,299,	12,527,
Lancashire	11,237,	11,962,	12,320,	12,841,
Cheshire	806,	850,	895,	935,
Shropshire	1,044,	1,135,	1,221,	1,558,
Gloucestershire, Somersetshire, } and Devonshire	2,574,	1,875,	1,851,	1,975,
Monmouthshire	4,162,*	4,125,	4,445,	4,569,
South Wales	7,703,	7,912,	9,376,	9,092,
North „	1,812,	1,983,	2,082,	2,371,
Scotland	11,519,	12,650,	12,625,	14,126,
Ireland	124,	124,	124,	125,

* Average for six years, 1862-67.

III.—Quantity and Value of the IRON produced in the United Kingdom, Ten Years, 1858-67; also 1865, 1866, and 1867 separately.

[000's omitted.]

	Year.	Iron Ore.	Value.	Pig Iron.				
				Pro-duced.	Value.	Average Price.		
						Welsh.	Scotch.	Cleveland.
		Tons.	£	Tons.	£	£ s. d.	£ s. d.	£ s. d.
Average of } 10 years }	1858-67	8,748,	2,850,	—	—	—	—	—
U. Kingdom	1865	9,910,	3,325,	4,819,	12,048,	4 15 6	2 19 —	2 9 6
„	'66	9,665,	3,119,	4,524,	11,310,	4 8 6	3 4 —	2 9 6
„	'67	10,021,	3,209,	4,761,	11,903,	4 3 9	2 19 3	2 9 6
England	1865	7,925,	2,792,	2,739,	—	—	—	—
„	'66	7,629,	2,570,	2,577,	—	—	—	—
„	'67	8,169,	2,744,	2,811,	—	—	—	—
Wales	1865	486,	157,	917,	—	—	—	—
„	'66	424,	147,	953,	—	—	—	—
„	'67	545,	143,	919,	—	—	—	—
Scotland	1865	1,470,	367,	1,163,	—	—	—	—
„	'66	1,587,	397,	994,	—	—	—	—
„	'67	1,265,	311,	1,031,	—	—	—	—

IV.—Quantity and Value of TIN, the Produce of Cornwall and Devon, Ten Years, 1858-67; also 1865, 1866, and 1867 separately.

[000's omitted from the value columns only, thus 782*l.* = 782,000*l.*]

	Years.	Tin Ore.		Metallic Tin.		Average Price per Ton of			
		Quantity.	Value.	Quantity.	Value.	Tin Ore.		Block Tin.	
						£ s. d.	£ s. d.	£ s. d.	£ s. d.
Average of } 10 years }	1858-67	12,052	757,	7,779	861,	61 1 6	112 12 5		
	1865	14,122	782,	9,038	874,	55 6 —	96 5 —		
	'66	13,785	668,	8,822	782,	48 10 9	88 12 6		
	'67	11,066	549,	7,296	670,	50 18 —	91 17 3		

V.—Quantity and Value of COPPER, the Produce of the United Kingdom, Ten Years, 1858-67; also 1865, 1866, and 1867 separately.

[000's omitted from the value columns, thus 928*l.* = 928,000*l.*]

	Year.	Copper Ore.	Value.	Copper.	Value.	Average Price per Cwt.	
		Tons.	£	Tons.	£	£ s. d.	
Average of 10 years....	1858-67	211,877	1,158,	13,719	1,381,	5 6 3	
United Kingdom	1865	198,298	928,	11,888	1,135,	4 18 —	
„	'66	180,378	759,	11,153	1,019,	4 11 —	
„	'67	158,544	700,	10,233	832,	4 7 —	
Whereof relates to—							
Cornwall	1865	121,253	573,	7,413	699,	—	
„	'66	103,670	431,	6,551	601,	—	
„	'67	88,603	413,	5,990	494,	—	
Devonshire	1865	38,156	185,	2,337	223,	—	
„	'66	34,471	151,	2,248	206,	—	
„	'67	31,163	144,	2,036	168,	—	

VI.—*The Quantity of LEAD ORES, LEAD, and SILVER, the Produce of the United Kingdom, 1857-66; also 1864, 1865, and 1866 separately.*

	Year.	Lead Ore.	Lead.	Silver.
		Tons.	Tons.	oz.
Average of 10 years	1857-66	92,604	66,777	632,280
United Kingdom	1864	94,463	67,081	641,088
„	'65	90,452	67,251	724,856
„	'66	91,051	67,391	636,688
<i>Whereof relates to—</i>				
England	1864	59,824	42,191	—
„	'65	56,913	42,015	—
„	'66	59,366	43,648	—
Wales	1864	27,246	19,507	—
„	'65	26,009	19,621	—
„	'66	23,944	18,216	—

VII.—*Quantity and Value of ZINC and IRON PYRITES, the Produce of the United Kingdom, Ten Years, 1858-67; also 1865, 1866, and 1867 separately.*

	Year.	Zinc Ore.	Value.	Iron Pyrites.	Value.
		Tons.	£	Tons.	£
Average of } 10 years }	1858-67	13,550	37,311	115,188	71,958
	1865	17,843	52,478	114,195	71,174
	'66	12,770	42,665	135,402	77,933
	'67	13,489	41,341	116,889	67,453

VIII.—*Quantity of SALT, the Produce of Cheshire, Ten Years, 1859-68; also 1866, 1867, and 1868 separately.*

	Year.	Rock Salt.	White Salt.	Total.
		Tons.*	Tons.	Total.
Average of } 10 years }	1859-68	60,810	727,878	788,688
	1866	48,278	736,775	785,053
	'67	50,752	721,423	772,175
	'68	49,759	868,679	918,438

* 26 cwts. of rock salt go to the ton.

Trade of United Kingdom, 1868-67-66.—*Distribution of Exports from United Kingdom, according to the Declared Real Value of the Exports; and the Computed Real Value (Ex-duty) of Imports at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (<i>excluding Gold and Silver</i>), Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	Whole Years.					
	1868.		1867.		1866.	
	Imports from	Exports to	Imports from	Exports to	Imports from	Exports to
I.—FOREIGN COUNTRIES :	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland } Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium } Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries) } Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta } Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt } Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco } Western Africa } Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorla Islands } Indian Seas, Siam, Sumatra, Java, Philip- pines; other Islands } South Sea Islands } China, including Hong Kong } United States of America } Mexico and Central America } Foreign West Indies and Hayti } South America (Northern), New Granada, Venezuela, and Ecuador } " (Pacific), Peru, Bolivia, Chili, and Patagonia } " (Atlantic) Brazil, Uruguay, and Buenos Ayres } Whale Fisheries; Grnlnd., Davis' Straits, Southn. Whale Fishery, & Falkland Islands } Total—Foreign Countries	28,738,	7,085,	31,354,	6,723,	28,378,	7,776,
	37,818,	36,319,	37,302,	32,786,	37,928,	25,849,
	44,412,	15,466,	43,118,	17,462,	45,987,	17,408,
	7,252,	7,563,	5,642,	7,302,	6,185,	8,254,
	25,243,	14,226,	20,261,	15,295,	21,253,	15,637,
	366,	267,	289,	274,	415,	279,
	1,909,	932,	1,519,	814,	1,457,	601,
	48,	142,	73,	138,	116,	163,
	2,229,	1,810,	850,	2,394,	1,291,	2,647,
	68,	48,	26,	20,	62,	138,
	11,899,	9,605,	9,842,	9,037,	11,328,	8,951,
	43,063,	21,410,	41,048,	21,822,	46,853,	28,484,
	1,291,	1,010,	1,119,	1,050,	874,	1,438,
	5,154,	3,210,	4,798,	3,318,	3,409,	3,662,
	1,229,	2,783,	1,177,	2,710,	1,866,	3,402,
	7,930,	3,097,	8,259,	3,967,	6,134,	3,220,
	10,090,	8,178,	8,028,	9,984,	9,840,	11,470,
	146,	14,	108,	8,	149,	18,
	228,885,	133,165,	214,813,	135,104,	223,525,	139,397,
II.—BRITISH POSSESSIONS :						
British India, Ceylon, and Singapore	35,794,	23,561,	30,150,	24,688,	41,764,	23,030,
Austral. Cols.—N. So. W., Vict., and Queensld.	9,317,	8,895,	8,556,	6,619,	7,767,	9,133,
" " So. Aus., W. Aus., Tasm., and N. Zealand	3,254,	3,176,	4,334,	3,018,	3,657,	4,529,
British North America	6,781,	4,848,	6,807,	5,853,	6,869,	6,830,
" W. Indies with Btsh. Guiana & Honduras	6,711,	2,638,	6,058,	2,485,	6,615,	2,865,
Cape and Natal	2,702,	1,591,	2,741,	1,894,	2,719,	1,399,
Br. W. Co. of Af., Ascension and St. Helena	606,	649,	497,	674,	527,	583,
Mauritius	1,062,	384,	890,	377,	1,330,	569,
Channel Islands	400,	556,	404,	472,	431,	493,
Total—British Possessions	66,627,	46,298,	60,437,	46,080,	71,679,	49,431,
General Total£	295,512,	179,463,	275,250,	181,184,	295,204,	188,828,

Trade of United Kingdom, 1866-62.—*Computed Real Value of the Total Exports of Foreign and Colonial Produce and Manufactures to each Foreign Country and British Possession.*

Merchandise Exported to the following Foreign Countries, &c. [000's omitted.]	1866.	1865.	1864.	1863.	1862.
I.—FOREIGN COUNTRIES.	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark, & Iceland, & Heligoland } 4,993,	4,993,	4,457,	4,291,	3,487,	2,319,
Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland and Belgium... } 19,130,	19,130,	21,035,	20,153,	18,936,	14,515,
Western Europe; viz., France, Portugal, (with Azores, Madeira, &c.), and Spain, (with Gibraltar and Canaries) } 16,465,	16,465,	17,791,	16,969,	16,271,	14,015,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta } 1,417,	1,417,	1,201,	1,584,	2,122,	1,784,
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt } 305,	305,	426,	539,	451,	585,
Northern Africa; viz., Tripoli, Tunis, Algeria, and Morocco } 46,	46,	50,	62,	61,	58,
Western Africa 154,	154,	206,	170,	190,	262,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorla Islands } —	—	—	—	—	—
Indian Seas, Siam, Sumatra, Java, Philip- pines; other Islands } 17,	17,	29,	29,	19,	15,
South Sea Islands —	—	—	—	—	—
China, including Hong Kong 316,	316,	209,	279,	209,	100,
United States of America 3,344,	3,344,	3,943,	3,475,	4,352,	4,846,
Mexico and Central America 61,	61,	88,	434,	76,	65,
Foreign West Indies and Hayti 203,	203,	160,	200,	132,	157,
South America (Northern), New Granada, Venezuela and Ecuador } 52,	52,	60,	74,	67,	48,
„ (Pacific), Peru, Bolivia, Chili, and Patagonia ... } 64,	64,	44,	60,	70,	37,
„ (Atlantic), Brazil, Uruguay, and Buenos Ayres } 200,	200,	177,	157,	150,	154,
Other countries (unenumerated) 35,	35,	33,	110,	60,	26,
Total—Foreign Countries	46,801,	49,909,	48,586,	46,653,	38,986,
II.—BRITISH POSSESSIONS:					
British India, Ceylon, and Singapore 761,	761,	674,	908,	909,	791,
Austral. Cols.—New South Wales and Victoria, So. Aus., W. Aus., Tasm., and N. Zea. } 978,	978,	827,	1,069,	1,146,	903,
British North America 877,	877,	1,013,	674,	714,	790,
„ W. Indies with Btsh. Guiana & Honduras } 249,	249,	271,	515,	433,	341,
Cape and Natal 61,	61,	57,	111,	103,	114,
Br. W. Co. of Af., Ascension and St. Helena ... 83,	83,	78,	87,	96,	72,
Mauritius 14,	14,	16,	19,	38,	22,
Channel Islands 147,	147,	139,	192,	145,	145,
Other possessions 17,	17,	12,	9,	63,	12,
Total—British Possessions	3,187,	3,087,	3,584,	3,647,	3,190,
General Total£	49,988,	52,996,	52,170,	50,300,	42,176,

IMPORTS. — (United Kingdom.) — **First Two Months** (*January — February*),
1869-68-67-66-65. — *Computed Real Value (Ex-duty), at Port of Entry (and
therefore including Freight and Importer's Profit), of Articles of Foreign and
Colonial Merchandise Imported into the United Kingdom.*

(First Two Months.) [000's omitted.] FOREIGN ARTICLES IMPORTED.		1869.	1868.	1867.	1866.	1865.
		£	£	£	£	£
RAW MATLS.— <i>Textile.</i>	Cotton Wool	6,702,	4,686,	6,265,	10,055,	7,057,
	Wool (Sheep's) ..	1,667,	433,	898,	691,	728,
	Silk	2,296,	2,530,	2,781,	2,606,	2,283,
	Flax	408,	349,	580,	342,	324,
	Hemp	364,	283,	116,	254,	139,
	Indigo	377,	214,	279,	174,	211,
		11,814,	8,495,	10,919,	14,122,	10,742,
„ „ <i>Various.</i>	Hides	252,	202,	149,	197,	198,
	Oils	446,	437,	314,	469,	341,
	Metals	423,	401,	388,	442,	377,
	Tallow	222,	142,	76,	135,	155,
	Timber	184,	205,	278,	588,	703,
		1,527,	1,387,	1,205,	1,831,	1,774,
„ „ <i>Agricul.</i>	Guano	41,	171,	31,	47,	218,
	Seeds	451,	409,	433,	425,	458,
		492,	580,	464,	472,	676,
TROPICAL &c., PRODUCE.	Tea	2,430,	2,169,	2,098,	1,117,	681,
	Coffee	283,	345,	255,	211,	233,
	Sugar & Molasses	1,525,	1,466,	1,594,	1,443,	993,
	Tobacco	141,	316,	230,	304,	282,
	Rice	224,	139,	37,	80,	56,
	Fruits	305,	264,	75,	50,	81,
	Wines	745,	745,	604,	628,	465,
	Spirits	351,	285,	293,	247,	203,
		6,004,	5,729,	5,186,	4,080,	2,994,
FOOD	Grain and Meal.	6,122,	5,870,	4,868,	4,340,	1,509,
	Provisions	1,639,	1,374,	987,	981,	1,016,
		7,761,	7,244,	5,855,	5,321,	2,525,
Remainder of Enumerated Articles		2,044,	1,524,	652,	632,	579,
TOTAL ENUMERATED IMPORTS		29,642,	24,959,	24,281,	26,458,	19,290,
Add for UNENUMERATED IMPORTS (say)		7,410,	6,240,	6,070,	6,614,	4,822,
TOTAL IMPORTS		37,052,	31,199,	30,351,	33,072,	24,112,

EXPORTS.—(United Kingdom.)—First Three Months (January—March), 1869-68-67-66-65.—Declared Real Value, at Port of Shipment, of Articles of BRITISH and IRISH Produce and Manufactures Exported from United Kingdom.

(First Three Months.) [000's omitted.] BRITISH PRODUCE, &c., EXPORTED.		1869.	1868.	1867.	1866.	1865.
		£	£	£	£	£
MANFBS.—Textile. Cotton Manufactures..		12,339,	12,452,	13,567,	15,241,	10,947,
	„ Yarn	3,382,	4,168,	3,207,	3,769,	1,708,
Woolen Manufactures		5,406,	4,262,	5,416,	5,820,	4,047,
	„ Yarn	1,357,	1,681,	1,340,	1,329,	935,
Silk Manufactures.....		287,	246,	288,	402,	296,
	„ Yarn	47,	43,	58,	76,	60,
Linen Manufactures		1,810,	1,713,	2,071,	2,717,	2,084,
	„ Yarn	601,	640,	674,	630,	515,
		25,229,	25,205,	26,621,	29,984,	20,592,
<i>Sewed.</i> Apparel		685,	483,	457,	617,	536,
	Haberdy. and Millnry.	1,093,	1,089,	1,213,	1,459,	1,002,
		1,578,	1,572,	1,670,	2,076,	1,538,
METALS Hardware		903,	833,	870,	1,037,	892,
	Machinery	887,	809,	1,002,	968,	1,296,
	Iron	3,596,	2,924,	2,899,	3,121,	2,399,
	Copper and Brass.....	676,	844,	657,	559,	913,
	Lead and Tin	1,078,	810,	684,	834,	576,
	Coals and Culm	1,053,	1,051,	995,	1,022,	905,
		8,193,	7,271,	7,107,	7,541,	6,981,
<i>Ceramic Manufcts.</i> Earthenware and Glass		623,	555,	602,	562,	524,
<i>Indigenous Mnfrs.</i> Beer and Ale.....		532,	539,	555,	585,	595,
	Butter	66,	48,	69,	86,	56,
	Cheese	21,	30,	29,	39,	22,
	Candles	34,	40,	36,	54,	28,
	Salt	81,	89,	69,	65,	33,
	Spirits	47,	46,	41,	31,	69,
	Soda	308,	340,	368,	383,	228,
		1,089,	1,132,	1,167,	1,243,	1,031,
<i>Various Manufcts.</i> Books, Printed		144,	145,	135,	139,	98,
	Furniture	45,	36,	39,	60,	91,
	Leather Manufactures	605,	559,	411,	534,	614,
	Soap	50,	60,	58,	43,	44,
	Plate and Watches ...	106,	75,	96,	86,	97,
	Stationery	95,	88,	81,	89,	95,
		1,045,	963,	820,	951,	1,039,
Remainder of Enumerated Articles		2,830,	2,600,	2,367,	2,557,	2,200,
Unenumerated Articles.....		2,216,	2,125,	2,028,	2,077,	1,730,
TOTAL EXPORTS.....		42,803,	41,423,	42,382,	46,991,	35,635,

SHIPPING.—FOREIGN TRADE.—(United Kingdom.)—First Three Months
(January—March), 1869-68-67-66.—Vessels Entered and Cleared with Cargoes,
including repeated Voyages, but excluding Government Transports.

(First Three Months.) ENTERED:—	1869.			1868.		1867.		1866.	
	Vessels.	Tonnage (000's omitted.)	Average Tonnage.	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)
<i>Vessels belonging to—</i>	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Russia	93	38,	409	48	18,	64	26,	71	28,
Sweden	134	27,	202	79	17,	126	26,	110	23,
Norway	771	194,	252	387	102,	528	123,	555	128,
Denmark	316	39,	123	315	34,	511	57,	300	34,
Prussia and Ger. Sts.	600	176,	293	484	157,	563	155,	489	146,
Holland and Belgium	522	69,	132	361	53,	388	48,	504	67,
France	570	57,	100	527	53,	570	53,	794	79,
Spain and Portugal	99	36,	364	125	38,	94	33,	77	24,
Italy & other Eupn. Sts.	233	95,	408	127	47,	111	37,	263	86,
United States	69	70,	1,014	139	142,	91	100,	123	123,
All other States	2	1,	500	3	1,	—	—	3	1,
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United Kingdm. & } Depds.....	3,409	802,	235	2,595	662,	3,056	658,	3,289	739,
	5,239	1,930,	368	5,115	1,885,	4,868	1,739,	5,422	1,861,
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Totals Entered....	8,648	2,732,	316	7,710	2,547,	7,914	2,397,	8,711	2,600,
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CLEARED:—									
Russia	137	56,	409	116	46,	93	37,	104	42,
Sweden	91	28,	307	75	20,	107	26,	112	32,
Norway	367	90,	245	217	59,	296	74,	287	72,
Denmark	308	41,	133	311	40,	514	59,	261	36,
Prussia and Ger. Sts.	699	208,	296	655	197,	768	196,	657	168,
Holland and Belgium	424	72,	170	377	63,	355	59,	413	70,
France	645	80,	124	832	99,	898	105,	925	109,
Spain and Portugal	86	35,	407	108	38,	83	29,	79	24,
Italy & other Eupn. Sts.	297	122,	411	125	50,	165	59,	272	90,
United States	111	102,	919	173	167,	114	119,	137	140,
All other States	2	1,	500	2	1,	5	1,	6	3,
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United Kingdm. & } Depds.....	3,167	835,	263	2,991	780,	3,398	764,	3,253	786,
	6,804	2,500,	367	6,883	2,396,	5,998	2,114,	6,287	2,183,
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Totals Cleared....	9,971	3,335,	334	9,874	3,176,	9,396	2,878,	9,540	2,969,

GOLD AND SILVER BULLION AND SPECIE. — IMPORTED AND EXPORTED. — (United Kingdom.) — *Computed Real Value for the Three Months (January—March), 1869-68-67.*

[000's omitted.]

(First Three Months.)	1869.		1868.		1867.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
Imported from:—	£	£	£	£	£	£
Australia	1,000,	1,	935,	—	1,168,	1,
So. Amca. and W. } Indies	565,	693,	628,	644,	406,	1,140,
United States and } Cal.	164,	390,	1,569,	572,	210,	347,
	1,729,	1,084,	3,132,	1,216,	1,784,	1,488,
France	177,	991,	175,	256,	160,	422,
Hanse Towns, Holl. } & Belg.	2,	477,	1,	98,	22,	65,
Prtgl., Spain, and } Gbrltr.	21,	29,	264,	27,	42,	20,
Mlta., Trky., and } Egypt	24,	1,	11,	14,	11,	2,
China	—	—	—	—	—	—
West Coast of Africa	29,	—	34,	3,	32,	1,
All other Countries...	17,	7,	333,	29,	102,	15,
<i>Totals Imported...</i>	1,999,	2,589,	3,950,	1,643,	2,153,	1,933,
Exported to:—						
France	1,238,	1,193,	2,868,	596,	1,079,	241,
Hanse Towns, Holl. } & Belg.	22,	20,	25,	679,	34,	1,273,
Prtgl., Spain, and } Gbrltr.	—	—	—	—	155,	—
	1,260,	1,213,	2,893,	1,275,	1,268,	1,514,
Ind. and China (viâ } Egypt)	216,	1,551,	346,	225,	7,	108,
Danish West Indies	—	—	—	—	—	—
United States	500,	—	16,	—	1,	—
South Africa	—	—	48,	—	—	—
Mauritius	—	—	—	—	—	—
Brazil	145,	—	185,	16,	13,	23,
All other Countries...	286,	104,	56,	57,	183,	38,
<i>Totals Exported...</i>	2,107,	2,868,	3,544,	1,573,	1,472,	1,683,
Excess of Imports	—	—	406,	70,	681,	250,
„ Exports	108,	279,	—	—	—	—

REVENUE.—(UNITED KINGDOM.)—31ST MARCH, 1869-68-67-66.

Net Produce in YEARS and QUARTERS ended 31st MARCH, 1869-68-67-66.

[000's omitted.]						
QUARTERS, ended 31st March.	1869.	1868.	1869.		Corresponding Quarters.	
			Less.	More.	1867.	1866.
	£	£	£	£	£	£
Customs	5,485,	5,547,	62,	—	5,527,	5,139,
Excise	5,990,	5,742,	—	248,	5,535,	5,481,
Stamps	2,542,	2,498,	—	44,	2,554,	2,425,
Taxes	431,	414,	—	17,	389,	384,
Post Office	1,200,	1,100,	—	100,	1,100,	1,105,
Property Tax	15,648,	15,301,	62,	409,	15,105,	14,434,
	3,271,	3,067,	—	204,	2,156,	1,914,
Crown Lands	18,919,	18,368,	62,	613,	17,261,	16,348,
	102,	101,	—	1,	93,	90,
Miscellaneous	1,089,	909,	—	179,	1,088,	1,355,
Totals	20,109,	19,378,	62,	793,	18,442,	17,793,
			NET INCR. £731,314			

YEARS, ended 31st March.	1869.	1868.	1869.		Corresponding Years.	
			Less.	More.	1867.	1866.
	£	£	£	£	£	£
Customs	22,424,	22,650,	266,	—	22,303,	21,276,
Excise	20,462,	20,162,	—	300,	20,670,	19,788,
Stamps	9,218,	9,541,	323,	—	9,420,	9,560,
Taxes	3,494,	3,509,	15,	—	3,468,	3,350,
Post Office	4,660,	4,630,	—	30,	4,470,	4,250,
Property Tax	60,258,	60,492,	564,	330,	60,331,	58,224,
	8,618,	6,177,	—	2,441,	5,700,	6,390,
Crown Lands	68,876,	66,669,	564,	2,771,	66,031,	64,614,
	360,	345,	—	15,	330,	320,
Miscellaneous	3,356,	2,586,	—	769,	3,073,	2,878,
Totals	72,592,	69,600,	564,	3,555,	69,434,	67,812,
			NET INCR. £2,991,772			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 31ST MARCH, 1869:—

An Account showing the REVENUE and other RECEIPTS of the QUARTER ended 31st March, 1869; the ISSUES out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the 31st March, 1869, in respect of such Charges.

Received:—

	£
Income received, as shown in Account I	20,109,888
Amount received as Advances in Aid of Ways and Means	1,000,000
Amount raised by Exchequer Bonds, issued per Act 31st Victoria, } cap. 27	600,000
Amount raised on Account of Fortifications, per Act 30th and 31st } Victoria, cap. 145	200,000
Amount received in repayment of Advances for Public Works, &c. ...	285,808
„ for New Courts of Justice	60,000
	<u>£22,255,696</u>
Excess of the Sums charged on the Consolidated Fund on the 31st March, 1869, payable in June Quarter, 1869, above the Balance, in Exchequer at that date, viz.:—	
Excess of Charge in Great Britain	£2,210,673
Surplus over Charge in Ireland	364,755
Net deficiency	*1,845,918
*Charge on the 31st of March, 1869	7,334,181
Paid out of Growing Produce in March Quarter, 1869.....	781,005
Portion of the Charge payable in June Quarter, 1869	6,553,176
To meet which there was in the Exchequer on the 31st } March, 1869	4,707,258
Net Deficiency as above	1,845,918
	<u>£24,101,614</u>

Paid:—

	£
Deficiency brought forward as per last Account, viz.:—	
Excess of Charge on the Consolidated Fund } above the Balance in the Exchequer in Great Britain	£4,562,375
Surplus over Charge on ditto in Ireland	936,888
Net Deficiency brought forward	3,625,487
Amount applied out of the Income to <i>Supply Services</i> (including } 2,000,000 <i>l.</i> on Account of the Expedition to Abyssinia, and } 600,000 <i>l.</i> for Exchequer Bonds paid off)	13,033,946
Amount advanced for New Courts of Justice.....	8,000
„ Greenwich Hospital	100,000
Charge of the <i>Consolidated Fund</i> on the 31st March, 1869, viz.:—	
Interest of the Permanent Debt	£5,235,767
Terminable Annuities	1,037,976
Interest of Exchequer Bonds	41,750
„ Bills	21,545
„ Advances on account of Deficiency ...	2,603
Principal of Exchequer Bills	15,000
The Civil List.....	101,285
Other Charges on Consolidated Fund	594,594
Advances for Public Works, &c.	283,661
Paid out of Growing Produce in March Quarter, } 1869	£781,005
Payable in June Quarter, 1869	6,553,176
	<u>7,334,181</u>
	<u>£24,101,614</u>

BRITISH CORN.—*Gazette Average Prices (ENGLAND AND WALES),
First Quarter of 1869.*

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on a Saturday, 1869.		Weekly Average. (Per Impl. Quarter.)					
		Wheat.		Barley.		Oats.	
		s.	d.	s.	d.	s.	d.
Jan.	2	50	11	47	2	26	9
"	9	51	5	48	1	26	4
"	16	52	8	49	—	25	9
"	23	52	4	49	7	26	4
"	30	51	5	48	10	27	6
Average for January		51	9	48	6	26	6
Feb.	6	51	—	47	10	27	5
"	13	50	9	47	9	28	1
"	20	50	3	47	—	27	4
"	27	49	7	46	2	28	6
Average for February		50	4	47	2	27	10
March	6	49	4	46	—	28	2
"	13	48	10	45	6	27	10
"	20	47	9	45	—	27	3
"	27	46	5	43	8	27	1
Average for March		48	1	45	—	27	7
Average for the quarter		50	2	47	—	27	3

RAILWAYS.—PRICES, *January—March;—and* TRAFFIC, *January—March, 1869.*
[Abstract from "Herepath's Journal" and the "Times."]

Total Capital Ex- pended Mlns.	Railway.	For the (£100). Price on			Miles Open.		Total Traffic. First 13 Weeks. (000's omitted.)		Traffic pr. Mile pr. Wk. 13 Weeks.		Dividends per Cent. for Half Years.		
		1st Mar.	1st Feb.	1st Jan.	'69.	'68.	'69.	'68.	'69.	'68.	31 Dec. '68.	30 Jun. '68.	31 Dec. '67.
£					No.	No.	£	£	£	£	s. d.	s. d.	s. d.
56,9	Lond. & N. Westn.	115½	118¼	112½	1,416	1,393	1,489,	1,438,	84	81	67 6	52 6	67 6
49,7	Great Western	49¾	54	48¼	1,386	1,365	938,	919,	56	57	15 —	12 6	15 —
20,8	" Northern...	109	111	107	487	487	490,	477,	80	78	75 —	42 6	75 —
28,2	" Eastern	38½	43	41	746	728	450,	432,	51	46	Nil	Nil	Nil
17,2	Brighton	51¼	53	50	365	336	258,	244,	64	62	12 6	"	"
20,1	South-Eastern	79½	84	79½	346	340	311,	302,	78	79	40 —	22 6	40 —
16,9	" Western....	90	91	89	521	503	282,	275,	53	49	52 6	40 —	52 6
209,8		76¼	79	75½	5,267	5,152	4,218,	4,087,	67	65	37 6	24 3	35 8
33,0	Midland	118	117¾	113½	778	761	781,	676,	84	72	57 6	50 —	55 —
22,9	Lancsh. and York.	125½	130¾	128¼	411	403	604,	593,	122	112	67 6	67 6	65 —
15,8	Sheffield and Man.	54¼	47½	47¼	251	251	267,	242,	90	78	25 —	Nil	20 —
39,9	North-Eastern	104	105	100¼	1,260	1,242	912,	862,	56	55	60 —	45 —	60 —
111,6		100¼	100	97¼	2,700	2,657	2,564,	2,373,	88	79	52 6	40 7	50 —
22,0	Caledonian	77	79¾	76	1,425	1,407	837,	789,	47	45	37 6	15 —	25 —
6,2	Gt. S. & Wn. Irlnd.	97	100	97	420	420	—	—	22	22	45 —	50 —	45 —
359,6	Gen. aver.	85¼	87¼	83¾	9,812	9,636	7,619,	7,249,	68	64	41 11	30 7	40 —

Consols.—Money Prices, 1st March, 93 to ⅛.—1st Feb., 93⅛.—1st Jan., 93⅜ to ½.
Exchequer Bills.—1st March, 2s. dis. to 2s. pm.—1st Feb., 6s. to 11s. pm.—1st Jan., 1s. to 6s.
pm.

BANK OF ENGLAND.—WEEKLY RETURN.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the FIRST QUARTER (Jan.—March) of 1869.

[0,000's omitted.]

ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
1	2	3	4	5	6	7
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.	DATES.	Assets.			Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
Notes Issued.	(Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.		
£	1869.	£	£	£	£	1868. Per ann.
Mlns.		Mlns.	Mlns.	Mlns.	Mlns.	3 Dec. 3 p.ct.
32,44	Jan. 6 ...	11,01	3,98	17,44	24,03	
32,53	„ 13 ...	11,01	3,98	17,53	24,12	
32,59	„ 20 ...	11,01	3,98	17,59	23,97	
32,75	„ 27 ...	11,01	3,98	17,75	23,52	
32,45	Feb. 3 ...	11,01	3,98	17,45	23,82	
32,27	„ 10 ...	11,01	3,98	17,27	23,33	
32,34	„ 17 ...	11,01	3,98	17,34	23,16	
32,18	„ 24 ...	11,01	3,98	17,18	22,79	
31,93	Mar. 3 ...	11,01	3,98	16,93	23,57	
31,96	„ 10 ...	11,01	3,98	16,96	23,39	
31,98	„ 17 ...	11,01	3,98	16,98	22,72	
31,98	„ 24 ...	11,01	3,98	16,98	23,00	
31,47	„ 31 ...	11,01	3,98	16,47	23,61	

BANKING DEPARTMENT.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					Assets.					
Capital and Rest.		Deposits.		Seven Day and other Bills.	DATES. (Wdnsdys.)	Securities.		Reserve.		Totals of Liabili- ties and Assets.
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
£	£	£	£	£		£	£	£	£	£
Mlns.	Mlns.	Mlns.	Mlns.	Mlns.	1869.	Mlns.	Mlns.	Mlns.	Mlns.	Mlns.
14,55	3,19	6,47	19,49	,42	Jan. 6	13,98	20,65	8,41	1,08	44,13
14,55	3,26	6,64	21,12	,50	„ 13	15,88	17,71	8,41	1,07	43,07
14,55	3,32	4,21	20,17	,48	„ 20	15,93	17,08	8,62	1,11	42,74
14,55	3,33	4,02	19,96	,50	„ 27	15,13	16,92	9,23	1,08	42,36
14,55	3,36	4,57	17,73	,49	Feb. 3	14,03	16,99	8,63	1,06	40,71
14,55	3,37	4,73	17,49	,47	„ 10	14,03	16,51	8,94	1,14	40,61
14,55	3,39	4,66	17,95	,48	„ 17	14,08	16,63	9,18	1,13	41,03
14,55	3,35	5,03	17,47	,46	„ 24	14,08	16,31	9,39	1,08	40,80
14,55	3,65	5,51	17,55	,42	Mar. 3	14,08	18,16	8,36	1,09	41,69
14,55	3,66	6,49	18,42	,43	„ 10	14,08	19,63	8,57	1,10	43,56
14,55	3,67	7,20	17,98	,46	„ 17	14,13	19,35	9,26	1,13	43,87
14,55	3,69	7,51	17,03	,43	„ 24	14,00	19,12	8,98	1,12	43,22
14,55	3,69	7,89	17,48	,48	„ 31	15,00	20,13	7,86	1,10	44,09

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND and WALES on Saturday in each Week during the FIRST QUARTER (January—March) of 1869; and in SCOTLAND and IRELAND, at the Three Dates, as under.

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES.	London: Cleared in each Week ended Wednesday.*	Private Banks. (Fixed Issues, 4,04).	Joint Stock Banks. (Fixed Issues, 2,74).	TOTAL. (Fixed Issues, 6,78).	Weeks ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6,35).	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 2,75).
1869.	£	£	£	£	1869.	£	£	£	£	£	£
Jan. 2	60,75	2,73	2,25	4,97							
" 9	76,02	2,81	2,34	5,15							
" 16	65,29	2,89	2,36	5,25							
" 23	37,85	2,90	2,36	5,26							
" 30	59,92	2,84	2,34	5,18	Jan. 30	3,46	3,24	6,70	1,82	2,82	4,64
Feb. 6	83,55	2,81	2,34	5,15							
" 13	65,34	2,76	2,33	5,09							
" 20	83,01	2,71	2,32	5,03							
" 27	58,23	2,68	2,30	4,98	Feb. 27	3,43	3,23	6,66	1,78	2,75	4,53
Mar. 6	90,40	2,73	2,34	5,07							
" 13	68,29	2,75	2,35	5,10							
" 20	78,36	2,74	2,34	5,08							
" 27	60,76	2,77	2,40	5,17	Mar. 27	3,40	3,18	6,58	1,73	2,68	4,43

* The Wednesdays preceding the Saturdays.

FOREIGN EXCHANGES.—Quotations as under, LONDON on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on LONDON—with collateral cols.

1	2	3	4	5	6	7	8	9	10	11	12
DATES.	Paris.				London on Hamburg. 3 m. d.	New York. 60 d. s.	Calcutta.		Hong Kong. 6 m. s.	Syd- ney. 30 d. s.	Standard Silver in bars in London. pr. oz.
	London on Paris. 3 m. d.	Bullion as Arbitrated.		India Council. 60 d. s.			At Calcutta on London. 6 m. d.				
		Agnst. Engd.	For Engd.								
1869.		pr. ct.	pr. ct.			pr. ct.	d.	d.	d.	pr. ct.	d.
Jan. 2 ..	25.40	—	.1	par.	13.11	109 $\frac{3}{8}$	23 $\frac{1}{2}$	—	52 $\frac{1}{2}$	$\frac{1}{2}$ pm.	60 $\frac{7}{8}$
„ 23 ..	.37 $\frac{1}{2}$	—	—	„	.10 $\frac{3}{4}$	„	„ $\frac{3}{4}$	23 $\frac{7}{8}$	„ $\frac{1}{4}$	„	„ $\frac{3}{4}$
Feb. 6 ..	„	.1	—	„	„ $\frac{1}{2}$	„ $\frac{5}{8}$	„	24 $\frac{5}{16}$	53	„	61
„ 20 ..	„	.1	—	„	„ $\frac{3}{4}$	108 $\frac{7}{8}$	24	„ $\frac{1}{8}$	„	„	60 $\frac{7}{8}$
Mar. 6 ..	„	.1	—	„	„ $\frac{1}{2}$	109	23 $\frac{5}{8}$	„ $\frac{15}{16}$	„	„	„ $\frac{3}{4}$
„ 20 ..	.35	.1	—	„	„	108 $\frac{5}{8}$	„ $\frac{3}{4}$	24	„ $\frac{1}{2}$	„	„ $\frac{1}{2}$

JOURNAL OF THE STATISTICAL SOCIETY,

SEPTEMBER, 1869.

OPENING ADDRESS *of the* PRESIDENT *of* SECTION F (ECONOMIC SCIENCE *and* STATISTICS), *of the* BRITISH ASSOCIATION *for the* ADVANCEMENT *of* SCIENCE, *at the* THIRTY-NINTH MEETING, *at* EXETER, *August*, 1869. *By the* RIGHT HONOURABLE SIR STAFFORD NORTHCOTE, BART., C.B., D.C.L., M.P.

IF it had not been the custom for those who occupy the position which I have been called on to fill, to open the proceedings of the Section with some general remarks, I should have invited you to proceed to the consideration of the papers which will be laid before you, without any preface. For the preface is not only the dullest part of a work, and that which is the most frequently skipped; but, as a matter of authorship, it is the part which ought to be written last, because it ought to be adapted to that which is to follow it; and what that may be, I do not yet fully know.

Forecasting, however, as well as I can, the character of the work which now lies before us, though not prepared as yet to present to you a summary of what you may expect, I cannot doubt that the transactions of the present meeting will continue to exhibit the tendency of statistical inquiry to take year by year a wider range. That such is its tendency is, I think, not only evident to the observer, but may be said to be a law of the science. For the statist is not animated by a mere spirit of curiosity, nor does he content himself with the simple accumulation of facts. His objects are at once nobler and more practical. He aims at discovering the actual condition of his country, and the causes of that condition, with a view to discover also the methods of improving it. Now, even the true condition of the country is not immediately obvious to the superficial observer; while the causes of the several phenomena which it exhibits lie very deep, and can only be discerned by the aid of patient and extensive inquiries, conducted with skill and discernment, as well as with the most rigid exactitude; and the investigation of the methods by which improvements may be effected imposes a further and at least an equally severe labour. The "Condition of England" question is one which does not lie in a nutshell.

I need not, I am sure, recall to the recollection of such an audience as the present, the interesting Report presented by an eminent member of this Association,* whom we have now the pleasure of seeing amongst us, to the International Statistical Congress of 1860. You will remember how he drew attention to the two great laws which the study of statistics reveals to us, and on which the science rests,—the law of Stability, which teaches us to deduce from the observation of particular phenomena general conclusions as to the regularity of their recurrence; and the law of Variation, which teaches us in what manner, and within what limits, the conditions of human life, and the current of human action, may be modified or controlled by man. The main interest of our studies is, of course, concentrated on the working of this second law, and on the discovery of the limits within which our power is confined, and here it is that we find the necessity for that extension of the range of our inquiries to which I have adverted.

As in the case of most other sciences and branches of learning, so most assuredly in the case of Statistics, our progress is marked by a series of disappointments. We begin in ignorance and we plunge into error; then we find out our mistakes, and, after having fancied that we had attained to great proficiency, learn, like the wise man of old, that the sum of our knowledge is, that we know nothing. From that point, if we are wise enough and honest enough to profit by our experience, we may indeed begin to make some solid progress; but both wisdom and honesty are needed for the purpose; aye, and courage too, and self-denial. For it is no slight trial to a man, who with much labour and much ingenuity has collected a mass of materials, and has constructed a theory out of them, to find that, through some mistake or oversight, he has gone wrong from the first, and that the whole work must be taken to pieces, the materials sifted and rearranged, and the favourite theory abandoned. No one will go through such a trial who is not supported by a genuine love of truth, and by a hearty conviction that it is a prize worth every sacrifice.

But this lesson, at all events, we learn from the history of these disappointments, and from the still more melancholy spectacle which sometimes presents itself of men fighting against facts in support of a theory, and trying to bend them to it, and to suppress what makes against it;—we learn that it is important to spare no pains in the first collection of our materials, to neglect no source of information, and to despise no element of calculation. We learn to be slow to dogmatise, and to be patient of correction and contradiction. And we learn, or ought to learn, that we cannot successfully

* Dr. Farr.

conduct a statistical inquiry into any particular subject, without keeping our attention alive to the inquiries which other persons are conducting in connection with other, and, perhaps, apparently remote, subjects, and to the bearing which their discoveries may possibly have upon our own.

Let me illustrate what I have been saying by a brief reference to our vital statistics.

Here, in the first place, we have an interesting illustration of the law of Stability and of the law of Variation. We are able to deduce from the statistics of births and of deaths averages of human life on which we can calculate with considerable certainty; and by so doing we are of course enabled to secure some important advantages. But we go further, we distinguish the various causes of death; we separate those which appear preventible from those over which we seem to have little or no control; and we conclude that if we can hit upon the proper remedies, we may so far qualify the rigid law of Stability by invoking the aid of her elastic sister the law of Variation, as to diminish in a sensible degree the rate of mortality, and to lengthen the term of human life. We act on the conclusion, and we apply our remedies. At first we flatter ourselves that we are in a fair way to attain our object; but, just as we are congratulating ourselves on having done so, some disagreeable fact crops up in an unlooked for quarter, which seems to upset our entire theory. We have just now had our attention drawn to a striking illustration of this contingency. Among the most prominent causes of death some years ago, small pox held a foremost place. To children it was especially fatal. But small pox, we learnt, was a disease preventible by vaccination. Vaccination was called to our aid, and with great success. The deaths by small pox were reduced within an exceedingly narrow compass. But it appears that while this, the most formidable, foe of childhood has been repelled, infant mortality has not been reduced in anything like a corresponding proportion. Diphtheria and scarlatina have taken the place of the vanquished malady; and the law of stability seems to be reasserting its authority, and to be demanding that, whether it be by the one disease or by the other, a like proportion of children shall every year fall victims among us. Our statist, however, are not discouraged by this untoward discovery. They draw from it the true inference,—that the causes of infant mortality, and indeed of human mortality at large, lie deeper than in the prevalence of a particular form of disease; and, while perceiving that vaccination alone will not put a stop to the premature deaths of children, they still believe those premature deaths to be in a measure preventible, and they seek for further methods of prevention. Having found that the repression of a particular disease is not sufficient, they

inquire into the predisposing causes which render our children obnoxious to disease generally, eliminating as it were from their inquiry the element of which they have already ascertained the value, and not troubling themselves to look for specifics against scarlatina or diphtheria, but for general prophylactics against diseases of whatever kind. In short they broaden the investigation, and seek to ascertain the general conditions of health.

This is in itself a great step in advance; but we must discard the proverb which tells us that it is but the first step which costs trouble. The further the inquiry is carried, the more its difficulties will show themselves. Remedies, which, before they have been tried, appear certain to be efficacious, may, when tried, only serve to show that we have not yet reached the root of the matter; while the collateral questions which the investigation will open up will prove, we may be well assured, pretty intricate ones to settle. When we are told that the primary object to aim at is, the “placing
“ a healthy stock of men in conditions of air, water, warmth, food,
“ dwelling, and work, most favourable for their development,” we feel that we have a task of pretty fair dimensions before us, and when we learn, among other things, that “a bad land tenure is a
“ cause of death ” (a proposition which does not appear to be limited to the case of Tipperary landlords), we may be pardoned for doubting whether any one can assign bounds to the range of the inquiry we have undertaken.

It is therefore both natural, and satisfactory, that statistical inquiry should year by year be extending to wider fields; since no one branch of it can be successfully pursued without speedily bringing us to the necessity of inquiring into the progress which is being made in other branches. The statistics of education, of crime, of pauperism, of labour, of health, of trade, of agriculture, of manufactures, and of every one of the details which enter into the survey of our national condition and prospects, are inter-dependent, and connect themselves one with another. At the same time, not only do they admit of being studied separately, but more true progress will be made by such a method of study. The educational inquirer examines the bearings of juvenile labour, for instance, from one point of view; the sanitary inquirer examines them from another; the inquirer into the causes and conditions of pauperism from a third; and so on. Where their inquiries tend to similar conclusions, each confirms the other all the more for the independence of their lines of argument. Where the conclusions are inconsistent, they are all the more suggestive; and suggestiveness, as it seems to me, is what constitutes the great value of statistics.

The old sarcasm, that you may prove anything by figures, has no doubt much truth in it. In the sense in which the words are

usually taken, they convey a protest against crude, and of course still more against unfair, statistics. But we may perhaps affix another idea to them, and one less uncomplimentary to our science. I am sometimes inclined to look at a great mass of statistics, undigested and shapeless as it seems, in the spirit in which the sculptor may be supposed to look at the rude block of marble out of which he is to fetch the form of beauty that lies hid within. Innumerable are the lessons which may be drawn from those hopeless looking figures, if only the student knows how to search for them; just as the forms which might be developed from the marble are innumerable, if the artist knows how to bring them to light. Remote as the region of statistics appears to be from the region of the imagination, there is no pursuit of which it may more truly be said that its success depends upon a proper exercise of the imaginative faculty. A wholly unimaginative statist is as intolerable as an unimaginative verse writer. A man must know what he is going to look for, and how he will look for it, before he begins his examination of a mass of figures; but he must keep his mind open, throughout the process, to receive the suggestions which the study is sure to produce. He must work upon an hypothesis, but he must be ready to abandon it as soon as he finds it untenable; and he should be quick to form new hypotheses, and to subject his materials to new tests, as occasion arises. For all this kind of work it is of great advantage that other minds should be brought into contact with his own, and that he should profit by the suggestions which their independent inquiries cannot fail to elicit.

It is of course obvious that meetings such as that in which we are now engaged, are likely to advance the study in the direction which I have been indicating. But that is not their sole advantage. It is, I think, no slight one, that we are called on to dispute in public, and to address ourselves to a general audience. If our studies are really valuable, if our methods of conducting them are sound, if we are doing good service to our country, we certainly ought to be able to interest and to attract our hearers. The subjects with which we deal are of general concern; they are not mere matters for closet speculation, nor is it good that we should treat them as if they were. Neither does the discussion of them involve the necessity for the use of strange or technical language; nor is it even necessary that we should weary our hearers with long columns of figures. It is rather a sign of indolence than of profundity when speakers oppress their hearers with technical phrases, and with processes of arithmetic. These should be used in the closet, but should be as sparingly as possible obtruded on the platform. Our methods of inquiry should indeed be strictly scientific; and we should never cease to be on our guard against

fallacies; but we should adapt our arguments to the circumstances of human nature, and endeavour to make them attractive by making them intelligible. In a word, if I may borrow an illustration which promises to take root among us, we must make our hearers feel that we are all on the earth together, and that we are not mere aeronauts addressing them from a balloon.

And here may I venture, as a Devonshire man, while bidding you heartily welcome to the county, to bespeak your indulgent consideration of the circumstances of my compatriots? We Devonians do not hurry on in the race of life quite so rapidly as some of our fellow-countrymen. Perhaps I may venture to say without offence that, as compared with north-countrymen, we live slowly. Our birth-rate is below the average of England, and so is our marriage-rate; but then it must be remembered that our death-rate is also low. If you compare us with Lancashire, for instance, you will find that, for less than 32 births per 1,000 in proportion to the population here, there are more than 38 per 1,000 there; [the precise figures for 1867 are Devon 31·75, Lancashire 38·19] that, for less than 16 marriages per 1,000 here, there are more than 19 per 1,000 there [Devon 15·72, Lancashire 19·04]. But then, for less than 20 deaths per 1,000 here, there are nearly 27 per 1,000 there [Devon 19·72, Lancashire 26·83]. So, again, you will find that our children die less rapidly than theirs, and our old people attain to greater ages. The proportion which the deaths of children under 5 years of age bear to the births in the year is, in Devonshire $19\frac{1}{3}$ per cent., and in Lancashire $32\frac{1}{2}$; while the proportion of deaths of people over 65 years of age is, in Devonshire $18\frac{1}{4}$ per cent., and in Lancashire $8\frac{3}{4}$ per cent. Our marriages, too, take place at a more advanced age than do theirs. Of our men only 6·05 per cent. marry under 21 years of age; of theirs 8·45 per cent. do so. For women the proportions are, in Devonshire 16·81 per cent., and in Lancashire 21·10. In short, we are born, we marry, and we die more slowly than they do. But we are not behind them in all things. If the state of education is to be judged of by the proportion of married people who can write their names, we may hold up our heads even by the side of Lancashire. Of our bridegrooms (in 1867) 82·7 per cent. wrote their names like men; of theirs only 76·8 per cent. Our brides did still better in proportion: 78·6 of them wrote their names, while in Lancashire only 56·0 did so. In the matter of wealth no doubt we are behind them; our assessment to the Schedules A, B, D of the income tax comes to only 10*l.* 12*s.* per head of our population, while theirs comes to 13*l.* 14*s.* On the other hand I doubt whether we have a very much larger number of paupers in proportion to our population than they have (on the average of the three years 1866-68 they seem to

have had 65 able-bodied paupers to every 10,000 of the population, while we had 69). And as regards criminals we fall far short of their ratio; the proportion of persons committed or bailed for trial in 1867 having been in Devonshire less than 4 to 10,000, and in Lancashire 12 to 10,000.

There are many other points on which it would be interesting to compare the two counties; and the comparison would be rendered still more valuable by extending it to other counties, of which these might be taken as the types. But time forbids my entering into the details which would be requisite. I have referred to the point principally for the purpose of reminding you that observations which might have been applicable in one part of England may be very much out of place in another; that each county has lessons of its own to teach, as well as to receive; and that Devonshire, though she does not aspire to the position of Lancashire as the standard bearer of British manufacturing and commercial enterprise, is not without her own claims to respect and admiration in regard of many of the essentials of human happiness.

I return from these local remarks to the wider field which more properly claims our attention; and I desire to invite you, who are so much more competent for the task than I am, to endeavour to realise for yourselves as far as may be the general character and tendencies of the age in which we live. To me it appears to be emphatically, and in the highest sense of the term, a statistical age; an age, that is to say, in which we are inquiring extensively and methodically into the facts by which we are surrounded, comparing ourselves with our neighbours, measuring our progress, and estimating our prospects with unprecedented care. Nor do we stop here; but, giving a practical turn to our inquiries, we study not only to ascertain, but to husband and to develop, our resources. Pressed, it may be, by the increasing competition of foreign nations,—pressed, too, by the consideration that our wealth and our desires for enjoyment are increasing far more rapidly than our population, and consequently than our supply of labour,—and conscious, moreover, that the non-reproductive sources of our material wealth, such as our minerals, are being very heavily drawn upon, we are daily casting about to find how this competition may best be sustained, how the balance between capital and labour is to be preserved, and how we can best economise those supplies which we fear may some day fail us.

We are beginning to feel that the time for waste has gone by. It may, perhaps, provoke a sneer from the cynic when he hears that England is becoming anxious as to the possible exhaustion of her coal measures, and is considering how and where she can find water enough for her population. One cannot help being reminded

of the sarcastic remark of the American traveller—that we had a tidy little country enough, but that for his part he was always afraid of tumbling over the edge of it. There is some truth at the bottom of the taunt; but it is not to such considerations that I wish to direct your attention. Rather I desire to point to the satisfactory indications, which such inquiries as I refer to present, of the determination of our people to make a stand against the bane of national prosperity,—Waste. I speak not only of waste of raw materials, but of waste in all its forms,—waste of power, of labour, of time, of health, and of life. Year by year we are learning to make skill do the work of strength, to draw greater results from equal efforts, and to supply our labourers with every comfort, every advantage, which science can devise for enabling them to fight the battle of life on better terms; and hence it comes that the question of education is not only claiming a larger share of our attention, but is presenting itself in new phases; and that we are looking to education in physical science, and even to technical education, with such unwonted interest. We are grappling, I think, more boldly than we ever did before with the difficult problems of our national life, and are advancing to their solution with greater breadth of view and greater confidence of step.

Let me offer an illustration of the economy of labour which is taking place among us, by a reference to some remarkable statistics which have quite recently been laid before us. Last week my friend, Mr. Shaw Lefevre, introduced the Merchant Shipping Bill into the House of Commons; and, after pointing out the enormous increase which had taken place in our commercial navy in the last fourteen years, and showing that we had now as much sea-going tonnage as all other nations put together, proceeded to say, that, while the amount of tonnage had increased since 1854 by no less than 50 per cent., the number of seamen required to navigate it had increased by only 21 per cent; that in 1868 we required one man less to work every 100 tons of shipping than we required in 1854, or, in other words, that we could work our present marine with 55,000 fewer men than would have been necessary for the same amount of tonnage fourteen years ago. And, to show to how great an extent this economy had been brought about by the introduction of machinery and improved methods of working, Mr. Lefevre gave the particulars of the manning of twenty-two large sailing vessels in the years 1849, 1859, and 1869 respectively, showing that in the first of those years they required crews amounting to 463 men, in the second to 417, and in the third to no more than 348;—the ships being identical, and the voyages nearly the same.

I have dwelt at some length on these figures, because they suggest to me several reflections. The first is one in which I think

we may justly indulge, and which is the counterblast to that sarcasm which I quoted just now from an American critic;—that the power of England is not to be measured by the dimensions of this little island, but rather by those of the great empire of the seas which it has so long been our boast to rule. If we were to fall over our country's edge we should only fall into an element which we have made our own. England, it may truly be said, that is, the mere island of Great Britain, is but the shadow of herself, and we might address our rivals in the proud words of the Talbot of Shakespeare—

“ You are deceived, my substance is not here ;
For what you see is but the smallest part
And least proportion of humanity.
I tell you, madam, were the whole frame here,
It is of such a spacious lofty pitch,
Your roof were not sufficient to contain it.”

Justly, then, in our statistical inquiries we take note, not only of the progress of England proper, but of all parts of the great British empire; and this you will observe in looking to the various collections of information which Parliament is annually making for us,—that year by year fuller statistics are produced with relation to our colonies and dependencies. That valuable Fifteen years' abstract, which has now reached its sixteenth number for the United Kingdom, has been adapted to the British colonies for four or five years past, and to India for two or three. We have, in addition to these compendious handbooks, several more voluminous collections of tables relating both to our colonies and to foreign countries, enumerating not only their areas, populations, amounts of revenue, expenditure, and debt, and the extent of their trade; but in the cases of many of our colonies giving most useful information as to their moral and social condition, the state of education, of crime, of immigration, of wages, of prices, of land sales, mortgages, savings' banks, and an immense variety of other matters. All these are a testimony to the extended character of our transmarine connections and interests, and may be taken at once in explanation and in justification of our position as a colonising power. In spite of all that may be said as to the alteration of the relations between England and her dependencies, she need hardly be called on to abdicate her proud title of the “Mother of Nations,” while she can point to these effects of her influence in every quarter of the globe.

Another reflection which occurred to me when I dwelt on those statistics of our shipping just now, was this: Our population continues to increase; but it increases far less rapidly than our wealth. That is a fact which, if it stood alone, would indicate that in the struggle between capital and labour the advantage was likely to be

on the side of labour, for that the demand would be in excess of the supply. But this advantage is to a considerable extent corrected by the increasing economy of labour indicated by the figures which Mr. Lefevre gives us for a single trade, and which are no doubt equally applicable to other trades.

It is sufficiently obvious that such economy must in the main be advantageous; at the same time we must not forget that the displacement of labour is often the cause of suffering, and sometimes, when it occurs suddenly, of very severe suffering. It may produce, not only individual distress, but, under certain circumstances, even political danger. If it were possible so to reconstruct society as to give every individual member of it a direct share in every gain made by society as a whole, this particular danger would of course vanish. But this is the theory of Socialism; and we have no evidence that, if socialism were in the ascendant, society would make these gains at all. Reasoning leads us to the conclusion that it would not; and the time is probably far distant when England will accept a system which has so obvious a tendency to discourage private and individual enterprise.

Nevertheless, it cannot be denied that Englishmen are beginning to look to Government for assistance, and to distrust individual action, to a much greater extent than formerly.

Some years ago it used to be thought to be the duty of the Government to foster private enterprise by protective laws, monopolies, bounties, and differential duties. The great Free Trade movement overthrew this theory, and left upon us the impression that, the more private enterprise was left to itself, and the less the Government interfered with it, the better. But of late the tide of public opinion has seemed to be setting in a somewhat different direction. Not that we are going back towards the protective system; but that, on the one hand, we are beginning to invite or to urge the Government to take upon itself work for which a few years back we should have deemed it utterly incompetent, and which we should have jealously reserved for private hands; while, on the other hand, our private enterprise is becoming more and more dependent on the assistance of the Government for its own proper organisation and development. Thus, in this matter of our Merchant Shipping, while we have been repealing our navigation laws and sweeping away every vestige of a differential duty, we have been creating a code of almost Brobdignagian dimensions for the regulation of every detail of our marine affairs. The choice of proper masters and mates is no longer left to the discretion of the shipowner; he must employ men who have passed a Government examination, and who hold certificates which the Government may cancel in case of any misconduct. The contracts between owners

and seamen are regulated by the Government, and are made under the direct superintendence of public officers. The proper construction and fitting of the ships, their sanitary arrangements, the quantity and quality of the provisions and medicines, and the strength and texture of the anchors and chain cables, are all matter for the consideration of the same paternal mind. Nor is this kind of care confined to a single branch of industry. There are many others with which the Government concerns itself, and still more with which it is pressed to do so ; while at the same time we are becoming accustomed to its direct action in the management of various classes of business, and are not unwilling to see that action further extended.

Can it then be that we are learning to sink the idea of the individual in the idea of the State ? Do the mass of the people, as our constitution becomes more democratic, begin to see in the Government an organ better fitted to do their work than they find in the classes above them ? Perhaps, as monopolies are put down, and privileges abated, and education is more generally diffused, and a closer approach to equality is effected, the tendency to deal with questions nationally, rather than by the action of classes or of individuals, may increase. Perhaps, as the competition of foreigners presses upon us with greater severity, and as we become conscious that it is only to be encountered by the aid of all the resources, all the education, all the organisation that we can command, it is natural that the desire to invoke the powerful aid of the State in gathering up all the elements of our strength and giving it the best possible direction, should become more and more marked. Perhaps there may be something in the nature of things, which renders co-operation more and more necessary as we make greater progress in the work of subduing the universe. In the ruder states of society, when industry is in its infancy, the isolated labour of the individual suffices to procure the simple necessities of life which he requires. As civilisation advances, and greater results are sought, co-operation begins, and the division of labour is resorted to. By degrees we introduce, first the small capitalist, then the larger one, and then the joint-stock company. It may be that the tendency to invoke the aid of the Government is but another step in the same career. Or possibly we may explain it by the fact that the progress of civilisation is, as of necessity, accompanied by the growth of new dangers against which precautions have to be taken which the State alone is competent to take. In a civilised society, as we have lately been reminded, deaths by violence, that is to say by accident, have a tendency to increase. In England they are rapidly increasing, and special precautions are needed to render safe that free application of the vast forces of nature to the intercourse and the arts of

life which is now so essential to our prosperity. Or, lastly, it may be that in the increasing struggle for wealth the interests of the weaker classes, of the poor, the young, the female, are likely to be set aside unless the State interfere for their protection: and the acknowledged demand for such interference may be another cause for the tendency to which I have referred. Such seems, at all events, to be the tendency of the age, and it is one which it is impossible to notice without some uneasiness. That we have hitherto been somewhat too jealous of the State, and that it would be wise to call in its aid rather more freely, may probably be true. But the greatness of England has been achieved by the self-reliant energies of individual Englishmen; and by the energies of individual Englishmen it will be best maintained.

*On the CLASSIFICATION of the PEOPLE by OCCUPATIONS; and on
OTHER SUBJECTS connected with POPULATION STATISTICS of
ENGLAND. By T. A. WELTON, ESQ.*

[Read before the Statistical Society, 15th June, 1869.]

CONTENTS:

	PAGE		PAGE
I.—Introduction	271	III.—Summary	282
II.—Official Report on the Last Census.....	276	IV.—Suggestions as to the Forth- coming Census	285

I.—*Introduction.*

IT is perhaps natural, and certainly very usual, that in superficially viewing things, a kind of inverted image presents itself. Thus the sun, not the earth, was supposed to move; valleys are still considered by some to have been ordained for the accommodation of rivers; and the rural population have been thought to labour, merely in order to supply the towns.

The fact, that without any particular ordinance, the mere existence of springs, coupled with the irregularities in the surface of the earth, would necessitate the formation of rivers, is one to which some people think it almost a duty to shut their eyes. It harmonises better with their habits of thought to assume a providential decree for each individual fact, than to consider that the brooks run where they must, not where it is specially ordained they should, descending by the most facile course from the high to the lower land; gathering into lakes if they fall into hollow places, overflowing these, and again breaking away, perhaps at a sharp angle with their former course, receiving continually tributaries, which tend, perforce, to the same low level; anon swelling into navigable rivers, winding between level fields, but always keeping the same downward track, and eventually, except in a few instances, falling into the ocean.

Then there are exceptions even to these rules. Sometimes even rivers seem to have some choice which way they will run. Witness the wonderful natural canal, which carries part of the waters of the Rio Negro into the Orinoco; also the repeated instances of islands, formed by rivers running through low lands and finding two courses nearly equally eligible, which may or may not speedily reunite. If they do divide, rivers are still under a necessity: they

must ever follow the easiest path, and either form a natural canal, an island, or a delta, as circumstances may lead them.

The force of gravitation, which controls the course of rivers, is paralleled in human society by the almost equally potent necessity of providing for animal wants; and just as the infinite variety of natural phenomena may be traced to the operation of a few great laws under diverse circumstances, so the reasons which have impelled mankind to live together in cities or in villages, or to migrate from one place to another, will in general be found to be connected, if not with the instinct of self-preservation, at least with that wish which cannot but be universal, to obtain the most tolerable subsistence which seems to be within reach.

It were useless to endeavour to detail the steps by which, from the most primitive ages down to the present time, the organisation of society has been modified and rendered complex. It is certain, however, that as each river has its valley, each town has its natural field of action, according to the circumstances which led to its foundation, or prompted its extension.

Two motives, perhaps three, must have been early and powerful in their operation, in promoting the aggregation of dwellings. Men live together, at first, because a place is pleasant and suitable as a residence, and there is much fertile land near. Then the necessity of uniting for mutual defence perhaps impels them to congregate in denser masses. Lastly, trade seizes upon eligible spots for the forwarding of goods, and towns arise thereon.

Even causes, themselves irregular and capricious, though frequently operative in the formation of towns, must first press with the rigour of necessity on the *mass* of the population before a town can be formed. Thus the castle of a prince has often been the nucleus of a town; even the shrine of an adored saint, or the seat of a powerful religious establishment has frequently drawn together a considerable population. The services demanded by the prince, the pilgrims or the ecclesiastics have compelled, or attracted, servitors and traders to reside at such places. Then there has been a natural tendency to turn to account what other resources the place might be found to have, and generally a trading town, or even a seaport, has been formed, the latter usually as an adjunct to the town, on the nearest convenient spot, as Southampton was the port of Winchester.

Pilgrimages have ceased, at least in this country, but the annual summer migration of the denizens of cities serves to attract a regular population to places like Brighton and Scarborough. Medicinal springs, too, have given consequence to various towns. With us, and in a less degree abroad, the growth of particular manufactures has raised certain towns to greatness. Also where

otherwise, there would not be a centre of supply, near enough for the convenient recourse of the rural population, some place is sure to rise into importance, though without special advantages, perhaps deriving its original impetus from the spirit of its traders, but eventually acquiring additional claims to superiority, from being made the seat of a bishopric, or of a district tribunal, or particularly from the creation of a converging system of roads, such as is so strikingly exemplified at Norwich.

A mere county or assize town is by no means, for that reason alone, apt to become a place of importance. Fredericton, in New Brunswick, could never vie with St. John's, nor could Washington become a dangerous rival of Philadelphia or New York. Although we may fairly presume that places are usually pitched upon for such purposes, on account of their already having become important, yet a change of circumstances will occasion even a capital city like Winchester to be almost deserted, if *no real advantages exist*, such as without extraneous aid could give support to a large population.

This leads me to remark, that the fate of Winchester will soon be shared by great numbers of smaller places. The difficulties of transit are no longer so great as to render it necessary to have a small town to every five miles of territory, and a larger place every twenty or thirty miles; these local centres will therefore gradually fall into decay, and a few large places, aided by railway communication, will be found sufficient for the supply of our rural population and for the sale of their produce.

After all, in a peaceful country like this, towns may be said to be nothing more than aggregations of dwellings, and will not fail to increase or diminish in proportion to the need there is for them, and the greater or less attractions of other places. But as there are many groups of habitations dotted over the country, which are not easily distinguishable from towns, and as the boundaries of the recognised cities, boroughs, and other towns are most frequently irregular, it becomes desirable to lay down a definition by which to be guided, when speaking scientifically of their magnitudes.

The old rule made use of by the citizens of London was, that the outermost inhabitants should be able to call to each other from house to house; and this, as far as I can judge, was a very proper rule in former times. In these days, however, a few additions must be made to it; as, for example, Liverpool has extended itself beyond the Mersey, and many populous places have arisen near the outskirts of great cities.

If, then, we allow that a town should be held to extend so far as habitations are found to reach from its centre without material interruption, including places cut off by rivers, across which the

traffic by ferry is as easy and cheap, and almost as frequent as it would be by a bridge, and if we further grant a margin of say about one-fifth of the diameter rigidly measured, so as to embrace such localities as may lie a little beyond the regular line, but are in constant communication with the centre, by means of railways and omnibuses, we may flatter ourselves that very few places will be unfairly used, at least out of the hundreds within the United Kingdom.

It will still be necessary to stipulate that the boundary thus fixed shall be regular in form (either circular or elliptical, as occasion may require), and drawn so as to embrace, as nearly as possible, all the houses which might be claimed as belonging to the town. Also, that a certain minimum density of population shall be attained within the limits fixed; and the smaller the town, the lower this minimum density must be, since small places rarely possess a densely-peopled central portion, corresponding with the heart of a city.

In order to judge whether the place thus defined really is a town of the old-fashioned sort, or is merely an aggregation of habitations for the accommodation of miners or manufacturers, it next becomes necessary to examine the census of occupations.

In old-fashioned towns, such as Salisbury, Bury St. Edmunds, and Chester, a large proportion of the population are engaged in what I have denominated secondary occupations. In the other kind of places, those engaged in secondary occupations are not much above the national average, perhaps in some cases below it.

The secondary occupations are those connected immediately with the consumption of articles of necessity, and with the supply of the daily wants of the population. The primary occupations are those which are connected with the production and manufacture and traffic in articles, afterwards to fall into the hands of the secondary class, and in general all occupations which do not subserve merely the supply or benefit of the *neighbouring* population, but also that of distant places, or which are necessary for the fulfilment of national requirements.

The secondary classes, such as bakers, butchers, publicans, grocers, tailors, milliners, carpenters, blacksmiths, carriers, cab drivers, domestic servants, clergymen, doctors, and schoolmasters, are a part of the population with which every one must needs be familiar; but the primary classes are not often resorted to by the general public, nor do their productions or services reach the consumer, as a rule, except through the intermediation of some of the secondary classes.

The secondary classes exist everywhere, whether in towns or rural districts, on the coast or in the interior, among the rich and

poor alike, though varying in their numbers. None of the primary classes exist everywhere; in towns, agriculture cannot of course be carried on, and there are many rural districts in which commercial, mining, or manufacturing pursuits find no place; the unequal and partial distribution of our mining, manufacturing, and commercial population is in fact too obvious to need more than a bare reference to it.

Where the numbers of the secondary classes as a mass are few, each class of which their total is made up, will usually be found to participate, more or less, in the general scantiness of numbers; where they rise to special importance, each class will in general be observed to share in the augmentation more or less largely. But whether the populations engaged in the primary occupations are in the aggregate great or small, it is impossible to judge what ratio each particular class may be expected to bear to the total number. The primary classes depend on the natural advantages of the situation in which they are found, and may be in different cases almost wholly devoted to agriculture, to mining, or to manufacture; the secondary classes depend on the wants of human nature, which are not so variable, hence the greater regularity of their numbers.

These distinctions are broad enough, and by keeping them in mind, it is possible to devise a useful classification of the occupations of the people. Such a classification is indicated in my published papers on the Census of 1851, which I sent to the Census Commissioners of 1861.

I wish here to express my sense of the courtesy and attention with which my suggestions were received by the commissioners, and to say, that in the volume "On the Ages, Civil Condition, Occupations, &c., of the People in 1861," I recognise many striking improvements in classification, which will facilitate future investigations. I observe, also, with pleasure, a much-needed rectification in the form of the tables of birthplaces, and some important additional particulars as to the civil condition of the population at *various ages* in the several registration districts.

I must, however, take exception against the form of the tables on occupations, which (though improved) is still at variance with the principles which I have just been describing. I am deeply convinced that attention to those principles is necessary to a due understanding and vivid conception of the organisation of industry, and if I dwell upon the subject with earnestness, it is because I feel how important it is that that organisation should be distinctly shown and made obvious to all. The full meaning of other population statistics can never be gathered, and misconceptions of daily phenomena can never be guarded against until this subject is thoroughly explored.

I am the more urgently impelled to comment upon the matter, because the Census Commissioners have not merely disregarded my recommendations on this particular topic. In the appendix by our esteemed vice-president, Dr. Farr, at the end of the "Census Report," he appears to set up a different theory from mine, which must therefore be condemned by default, unless I am permitted to say something in reply. I therefore proceed to consider the appendix alluded to, which is entitled "The New Classification of the People according to their Employments."

II.—*Official Report on Last Census.*

In the first place, I would urge that the elaborate introductory essay contains no such comprehensive rules as ought really to form the basis of a scientific classification such as this is meant to be. There is much that is true, but also much tending to confuse the mind, rather than to supply a clue to the right method of reducing the chaos of occupations to an orderly arrangement. Indeed, I think the natural conclusions derivable from this essay are, that a scientific arrangement of the ambitious kind indicated is unattainable, and that even if attained, its practical value might not be very great.

Secondly, when the actual classification is come to, the introductory remarks are almost entirely ignored, and the conclusions are rather given on their intrinsic merits than deduced from what precedes them. Such as they are, they might have been arrived at empirically, without any attempt at a scientific introduction, and a new nomenclature; in which case no objection could have been raised, except upon their practical merits.

I have received an intimation that the two sections would not have been thus connected, but for an oversight in correcting the press. It will, therefore, be proper to consider them separately, although I am unable to understand why they should not substantially agree one with the other.

Reviewing the appendix more in detail, with a view to exhibit the grounds of the foregoing objections, we are first struck by the singular definition of the word "product" which it contains. For the sake of uniformity, not only things, but also services,* are treated as products; not only menial services, but the rites of religion, and the protection afforded by the civil and military powers, are also treated as products.

Again, every change in the form or in the condition of a product does not, it seems, make it a new product. It may be much

* "The men themselves rendering these services are indeed products," p. 228.

changed, it may undergo several processes, but is still the same product, we are told, *until it changes hands*. It then becomes a new product, even if not altered in the least. To quote the appendix:—

“Some products are consumed in their first form. Many articles, commonly secondary products, such as potatoes, turnips, &c., are consumed by the producers. Oftentimes the products are advanced a step further than the list indicates, by the intervention of the merchant or the shopkeeper; thus potatoes, &c., are sold in towns to the greengrocer, &c., in whose hands they become tertiary products.”

“Articles undergo great changes without becoming new products; thus grapes are converted into wine, apples into cider, thread often into calico, without changing hands.”

It is unfortunate that this very remarkable essay is buried in an appendix; I must not quote too largely from it, and yet I fear that few statisticians will peruse it in the original. The subject well merits fuller discussion than it seems likely to meet with.

I will not hesitate for a moment to allow, that for a scientific purpose, a non-natural significance may be allowably given to an ordinary word, such as “product.” But some proof should be given of the utility of every such new definition.

Finding that great stress had been laid upon the definition of the word “product,” and also upon the successive rank of different products, I naturally looked for some practical rule, deduced therefrom, and influencing the mode of classification. But I looked in vain. All ends in the uncomfortable assurance that there are some products, the exact rank of which cannot be stated, since it depends upon the number of hands through which the material for the manufacture of such products may have passed, and which the very manufacturers themselves cannot always know.

If it were desired merely to prove that all the things called products possess utility; if the object in view were only to demonstrate the fallacy of the two doctrines, (1) “That the land is the only source of wealth, and all persons not agriculturists are therefore unproductive;” and (2) “That manual labour is the only source of wealth:” if this were the object, it surely might have been accomplished in a more effectual and less cumbrous manner.

Again, if it were desired merely to prove the propriety of classifying the people, so that the workers on successive forms of the same original product should be placed together, and follow each other in their usual sequence, it would hardly seem to have been necessary to go into an argument so elaborate for that purpose only. Such an arrangement is perhaps one of the most obvious which could be suggested, although it by no means meets the whole

of the difficulties by which the process of classification is rendered arduous.

Perhaps it will be argued that the enlarged sense given to the word “product” *must* be admitted, if we agree to the division of all mankind into “those who are unproductive, and those who “create products.” But I see no occasion to admit such a crude and brief definition as that, and would recommend that it be superseded by one more suitable to the facts,* allowing the usual meaning to attach to the words employed. To lay down a short formula, and then twist everything into conformity with it, seems to my apprehension a very unscientific mode of procedure.

There follows a subdivision of the appendix, on the “Naming of Producers,” full of information, and gracefully expressed, like everything else from the pen of Dr. Farr, but which does not much advance the scientific part of the design, and certainly does not contain the grounds for the “classification of producers,” which comes immediately after, introduced by the paragraph commencing “Men may be conveniently grouped as producers in six classes and “in eighteen orders.” Here, no doubt, the section commences, which should have been printed separately.

Without laying much stress upon the matter, I must remark, that I can see nothing in the whole of the introductory essay which should prepare us for six classes and no more, and those the identical six which are afterwards expounded. There are *indications* of eight classes of producers, viz., of—

1. Mineral products.
2. Vegetable or agricultural products.
3. Animal products.
4. Products by transfer or transport.
5. Services considered as products.
6. Intellectual products.
7. Defence (a product).
8. Government (a product).

But nothing to show the exact manner in which the classification is to be accomplished. We now find the first four of the above treated as the commercial, agricultural, and industrial classes, and the last three grouped together as the professional class.

If we consider the six classes a little further, we shall see that they are absolutely based, to some extent, upon principles *not laid down* in the introductory essay, as, for example:—

The agricultural class is made to include all “*growers*” of crops and animals.

* *Ex. gr.* “Those who are employed upon objects of real or supposed immediate utility, and those who are not so employed.”

The industrial class is that of "makers" or artisans. "They deal in matter that is *either no longer living, or that never lived.*"

Now these classes are decidedly unlike the classes of producers of things respectively vegetable, animal, and mineral. They indicate a new idea, viz., the separation of "growers" of living things from those working on lifeless matter.

I do not profess to admire either classification. I believe I have been right in regarding rather the actual relations of classes, than such abstract notions as these. Enough, however, has been said concerning general principles. Let us consider next the detailed classification in the second part of the appendix, with a view to ascertain whether its parts are severally constituted in a proper manner.

The *first* class, consisting of three orders, corresponds with my Classes VII and VIII, and seems unobjectionable in itself, although capable of much subdivision.

The section of the *second* class, comprising "persons engaged in the domestic offices or duties of wives, &c." (Order 4), may be passed without comment. It has not much positive significance, as it is rather the complement of the population, than a distinct class of workers, and for that reason it might with much propriety be kept separate from the second section (Order 5), which is a positive, if not a properly defined, division of the actual working population.

Order 5 is made to comprise the incongruous elements of trade and menial service. Here we first meet with the fact, that the classification we are dealing with is so arranged as to ignore the great and in general well-defined class of retail traders. Indeed, the point of divergence between my plan and Dr. Farr's is just this, that he considers it impracticable to separate the traders from the rest of the population, looking, as he does, for a *perfect test* by which to discriminate between each of the several classes; whilst I am content to look chiefly to the practical results, attainable even by means of a somewhat rough separation. I have attempted to embody the process by which the mind naturally seeks to disentangle from the ordinary elements of the population of any place, those other elements which constitute its essential and characteristic features. And in proposing a more ambitious scheme than mine, the framer is obliged to contend with various difficulties, one of which is, that in many cases the same man has two or more occupations, as indeed was fully shown, in the case of farmers, by the Census Commissioners themselves. If it be judged that the essay on which I am commenting, so far from elucidating the

grounds for a purely scientific arrangement, tends to show that no such arrangement can possibly be reduced to practice, I am the better entitled to claim a share of attention for my scheme.

Menial servants correspond, of course, with the wants of the populations amongst whom they are found. Houses of entertainment for travellers and temporary residents are trading speculations, mainly based upon the wants of external populations. Thus the two classes do not become enlarged or contracted in like measure, but according to the dissimilar degrees of wealth and of activity in the populations which may be compared. For example, taking males (all ages)—

	Bath (City).	Bradford (Borough).	London.	Dorsetshire.
Innkeeper, hotelkeeper	36	82	467	359
Publican	125	56	5,924	149
Inn servant.....	84	83	10,553	192
• Total	245	221	16,944	700
Domestic servants (except inn servants)....	645	108	23,330	1,147
Proportion of domestic servants to each 100 innkeepers, &c.}	263	49	138	164

The extent to which domestic servants are employed is evidently far greater in Bath than in Bradford, when compared with the extent of inn and hotel accommodation at the respective places. The innkeepers depend upon a very different demand from that which gives employment to the domestic servants.

If the sub-orders were a little altered, by transferring inn servants into the same sub-order with innkeepers, the one would represent pretty fairly the menial class, and the other would form a section of the trading class.

A circumstance which illustrates the necessity of handling such questions in a *practical* manner, occurs here. The denominations “innkeeper,” “publican,” “beerseller,” are so variously applied in different places, that in spite of the *class* now under consideration being merely one “engaged in entertaining and performing “personal offices for man,” it has been judged expedient to include in one of its subdivisions the beersellers and publicans, as well as those who provide lodging and attendance, viz., the inn and hotel-keepers. This is a breach of the scientific rule, and might, of itself, have suggested the transfer of innkeepers, beersellers, &c., to another part of the classification. The class, if thus curtailed, would have been composed entirely of non-traders.

The *third* class is composed of two orders, and in the main is very satisfactorily conceived. But, again, we find a section of the trading portion of the community interposed in a very awkward manner. I allude to the second sub-order of Order 6.

Who can seriously maintain that pawnbrokers, marine store dealers, hawkers, costermongers, &c., ought to be included in the commercial class? They are merely a local accommodation, or a supplement to the class of retail shopkeepers, as the case may be. At all events, if they are included in deference to a scientific rule, why not bring in also the Manchester warehousemen, greengrocers, &c.?

Traffic is the soul of commerce, and those occupied about inland traffic are not improperly considered as appertaining to the commercial class. But it would have been better to have placed them in a distinct sub-order than in that which includes seamen and shipowners.

The *fourth* class is one so well defined by nature, that it would be hard to err seriously in arranging its details. This, then, requires no comment.

The *fifth* class, I think, is too extensive. Can we call a tin or copper miner, a "maker or artisan?" It seems to me that the miners should have formed a separate class.

I am glad that the Census Commissioners have now so far modified their former classification, as to gather into a distinct order "persons working and dealing in the textile fabrics and in "dress;" but I must object to one or two of the details of this new order. Drapers, mercers, tailors, and even boot and shoemakers would have been better placed elsewhere. The title of the order would then have needed some alteration, but we should not have been again troubled by a mixture of the ubiquitous trading class with the true manufacturing element.

By subdividing the fifth class into mining, manufacturing, and trading classes, and throwing into the last the kindred sub-orders already pointed out, my objections would be removed. As regards the *practicability* of doing this, I have given some evidence in my papers on the Census of 1851. I should have been glad to have had an opportunity of stating my views as to the modifications required in order more completely to harmonise the classification there described with the principles laid down in this paper. They are set forth in another paper, lately read before the Historic Society of Lancashire and Cheshire, and printed in the "Transactions" of that Society, vol. ix. As to the *usefulness* of my original classification, an illustration will best show how far it is to be preferred above that employed in the new census.

1851. *Males Aged 20 Years and upwards. Author's Classification.*

	Hereford-shire.	Cornwall.	Lancashire.	England and Wales.
I. Agriculture	15,213	27,862	57,854	1,248,430
II. Mining	261	21,097	22,839	206,058
III. Manufactures	392	1,903	164,379	624,888
IV. Retail trade	7,394	19,985	145,938	1,406,064
V. Commerce and traffic	1,116	6,244	70,862	454,804
VI. Menial occupations	731	860	6,063	105,829
VII. Professional occupations	527	1,288	8,159	95,344
VIII. Governmental „	461	2,329	12,411	158,723
Unclassified	1,966	3,641	50,570	416,873
Totals	28,061	85,209	539,075	4,717,013

1861. *Males Aged 20 Years and upwards. Census Classification.*

	Hereford-shire.	Cornwall.	Lancashire.	England and Wales.
I. Professional	1,254	4,232	24,000	339,207
II. Domestic	1,004	1,602	15,343	183,597
III. Commercial.....	895	6,501	82,838	468,804
IV. Agricultural	14,962	25,869	64,008	1,286,960
V. Industrial	9,727	44,116	402,734	2,580,425
VI. Indefinite, &c.	2,366	2,950	40,545	323,524
Of no specified occupation	277	475	5,383	48,056
Totals	30,485	85,745	634,851	5,230,573

III.—*Summary.*

Returning to the general principles of classification, I may be allowed to summarise my ideas regarding the primary and secondary classes.

This distinction did not occur to me early enough to be adequately set forth in my rearrangement of the Census of 1851, but it was distinctly indicated, towards the end of the first paper which I laid before the Society upon that subject, and my classification was not such as to throw serious difficulties in the way of a readjustment on the principle which had thus early been brought to light. Its results were but scantily developed then, but they already pointed to the necessity of including the surrounding country, subserved by particular towns, in order to make reliable comparisons between one social organisation and another; or that if this were not done, at least town ought to be compared with town, and rural district with rural district (taking into consideration the proximity of large towns) in forming just parallels.

I wish there were room to suppose that an investigation of the

organisation of complete systems of town and country districts would meet with the attention of this Society. I believe it can be clearly shown:—

1. That the central town of every such system must contain a large population of the secondary classes.
2. That if the central town be a manufacturing place, the proportion of the secondary classes will be found to be lower than otherwise, but in nearly the same ratio as if to a non-manufacturing town adequate in magnitude for a centre of supply to the district, a purely manufacturing town had been joined.
3. That the outlying districts belonging to the special sphere of action of such central town, by themselves, must contain a large proportion of population of the primary classes.
4. That, on the whole, the proportion of the secondary population in each entire system is very regular, but indicates, in a measure, the degree of wealth and luxury in the system in question, subject to the qualification that the denser the population, and the greater the activity and industry it exhibits, the more efficient a given proportion of secondary inhabitants may be presumed to be. On the other hand, among rude and scattered populations (and even among some of a better character), the extent of home work is so much enlarged, that the ratio of secondary workers may be comparatively small, without being accompanied by unusual privation or inconvenience.
5. That besides central towns, places of summer resort are always distinguished by possessing an especially large secondary population.
6. That towns in general have much larger proportions of secondary workers than country districts, with the exception of some manufacturing and mining villages or towns, where no traffic of any importance exists with the surrounding country, and which therefore contain only so many secondary workers as are required by their own inhabitants.
7. That the principal classes into which the secondary portion of the population may be divided, each of them bear a numerical relation to the total number, sufficiently constant to arrest the attention of the observer; but,
8. That the classes constituting the primary portion of the population have nothing like a constant numerical relation to each other. Nothing, therefore, but actual enumeration

can give us the most rudimentary idea of the proportions each of these classes may bear to their total number, in any particular place.

But, of course, the magnitudes of the respective primary classes indicate the necessities which have drawn the respective populations together, and the advantages which the several places have been found to possess.

Thus, returning to our opening illustration, we perceive, from considering the primary classes, the moral or physical forces which have compelled the population to take a particular course; to inhabit the land densely here, sparsely there; and which forces are nearly as irresistible as those by which a river is guided in its onward course. It remains but to add, that by removing the cause, in either case, the effect ceases; an invention, a new facility, or a discovery elsewhere may supersede a town, and cause it to fall into decay, whilst creating another in its stead, just as a river may be turned into a fresh channel by the cutting of a canal, which offers it an easier outfall than its original bed.

It is not without diffidence that I submit these views, knowing the keen criticism to which they will be subjected; but I am even more anxious for a thorough discussion and satisfactory settlement of the matter, than I am for the acceptance of my ideas; believing as I do that great progress may be made in depicting the organisation of labour, without waiting for the completion of that exhaustive inquiry which Dr. Farr has suggested.

I was led to contemplate the theoretical side of the question, by the reflection how difficult it was to give a rational explanation of the existence and growth of this enormous metropolis. We find many thousands here who live by supplying one another's wants; and the question arises, whence come the original means by which such a state of things is rendered possible? What, in fact, is the primary fund of which these persons manage to secure a share?

The operations of foreign commerce as carried on in London do not require a population much exceeding that of Liverpool; the expenditure of the magnates of the West End will not account for the other two millions, and even taking into consideration the Government establishments, the courts of law, and the various manufactures of particular districts, no sufficient reason presents itself for such a vast aggregation of persons. But when the immense numbers of the trading classes are considered, we are reminded that London is in effect the shop, not only of the greater part of England south of the Trent, but of a great portion of the civilised world, and we perceive that the sums expended here in retail purchases and in the employment of tradesmen must be enormous.

One source from whence the means of such expenditure are derived, is the large share the inhabitants of London possess in the profits of commercial operations carried on at a distance. The shipping which enter and clear from our port, carry but a part of the adventures of London merchants. Capital belonging to residents in London is also lent to every Government, and engaged in almost every enterprise throughout the world. All these facts require to be contemplated, before the great fact of the existence and continued growth of such a city can be felt to be natural, and even then, the unlimited field there is here for every kind of ability is not more evident than the painful uncertainty of the fortunes of individuals.

IV.—*Suggestions as to the forthcoming Census.*

The near approach of the period when arrangements must be made for taking another census, suggests the question, what new or altered inquiries may advantageously be made?

It will be obvious, that supposing the doctrines advocated in this paper meet with a favourable reception, it may become desirable to alter very materially the forms of the schedules of occupations, so as to elicit the facts with due regard to the distinctions proposed to be made.

With regard to the other portions of the last census, I would suggest that it may be of service to distinguish not only the ages of foreigners living in this country, but also the ages of the Irish and Scotch, and even the ages of the natives of other counties (taken collectively) who are found in each county, or at any rate in each division.

My motive for recommending this is, that were we acquainted with the ages of the strangers dwelling in each county, we could the more accurately estimate the mortality which takes place amongst them between the periods of the censuses. And an estimate of such mortality is indispensable, if we would learn approximately the numbers of persons who migrate into and from each county in each decennial period. For example, it is found that the number of Irish, Scotch, and foreign inhabitants resident in England was—

In 1851	762,216 persons.
„ '61	946,274 „

I believe it required an immigration of fully 340,000 persons in that decennium to fill up the gaps occasioned by deaths, and bring about the increase of 184,000 ascertained to have taken place. But I should be glad to possess data for a more exact calculation.

The same returns of ages would be of service to us, in forming

an estimate of the number of unregistered births, for they would show how many young children enumerated here were not born in England.

I have elsewhere gone into calculations, somewhat elaborate in their nature, which tend to show that not more than three births in one hundred now escape registration; but that the proportion approaches 10 per cent. in Liverpool, and 5 per cent. in London, being in most other places considerably lower.

I think it would be well, if an effort were made on the occasion of the coming census, to rectify the areas of parishes and townships where they are found to be inaccurate, and to set out the areas of subdivisions with at least so much detail as to allow of the total area of each registration district being truly stated. At present, the total area of a parish, *e.g.*, Rochdale, is returned in one district, whilst a large section of it is returned as to population in another, without any area.

I am not aware of any improvement being needed in the tables of numbers, ages, and civil condition of the population. But the suggestion made by Mr. Caird, that houses of two or three rooms only should be separately returned, appears to be valuable. There can be no doubt but that great inequalities exist in the cottage accommodation of different parts of the country, and by bringing this out in a striking manner, an early and rapid improvement in the more backward districts might be rendered more probable.

For an analogous reason, it might be well to show separately the numbers of children who were found to be working in agricultural "gangs," as distinguished from other children employed in agricultural work.

I do not think it will be found expedient to attempt a census of religions in 1871. If such a census were taken, however, I would suggest that attention should be paid to sex and age, as well as to mere numbers; and as the word Protestant is becoming unfashionable in some quarters, it might be expedient to provide separate columns for Anglican Catholics and Roman Catholics.

As to education, it is incumbent on the Government to attempt to obtain the fullest information possible, as that question will soon agitate the whole country, and certainly affects its interests very deeply. In the absence of any better method, pupils might be classified according to the status of the masters by whom they are taught, and formed into larger groups according to the character of the schools in which they are educated. The age and sex of the pupils would of course be shown, and if by any means the numbers *inefficiently* taught could be distinguished, such information would be of great value. A question might perhaps be put as to the time

each child had been at school, whether found at school at the date of the census or not.

A difficulty has hitherto existed in justly apportioning the deaths in hospitals and other public institutions amongst the registration districts whence their patients are believed to be derived. The best method of obviating this, would be to ascertain from the hospital authorities, in every case ending fatally, where their patient had been last resident before being received within their walls. If such information cannot easily be had, some advantage might result from the ascertainment at the census of the localities whence the living in-patients had come.

For want of such information, Dr. Farr has had no choice but to assume that every London parish participates equally, age for age, and sex for sex, in the mortality which occurs in London hospitals; and this assumption is proved to be untrue by the impossible results to which it leads in the case of the West London Union, where the mortality among females aged 15 to 20, is represented in his corrected tables at about one-sixth of what is probably the truth.

It is unfortunate that so few writers really take an intelligent interest in population statistics, that a habit has grown up of either receiving such statistics with an unseemly readiness of belief, or else of seizing every occasion of discrediting the returns, which, on the whole, are faithful and valuable. I am sure Dr. Farr must be equally disappointed, whether he sees his figures received with unreasoning acquiescence, or indiscriminating scepticism; and yet, until an entire change shall have taken place in the spirit of the newspaper press, he may almost reckon with certainty upon one or the other.

The uses of population statistics have, however, been as much to prevent the circulation of errors, as to promote the knowledge of facts, and in both respects I trust the productions of the Census Office will continue to be most valuable.

*On the DECLINE of SHIPBUILDING on the THAMES.**By* JOHN GLOVER, ESQ.

[Read before Section F, British Association, at Exeter, August, 1869.]

ANY one who has recently travelled up or down the Thames, between the Victoria Docks and Limehouse, must have been struck by the fact which the title of this paper assumes. The great ship-building yards are idle. We see most extensive "plants," with enormous capacity for work, which quite recently afforded remunerative employment to a large population, and made the river vocal with the busy hum of their industry, but scarcely any work is going on. There is a "horrid sound of silence;" the "yards" are deserted, and, like a curse, idleness has settled on the district, with sickness, poverty, bankruptcies, and pauperism in its train. The causes of a fact so painful cannot be uninteresting to this Section of the British Association.

Of the fact itself, I shall not trouble the Section with any proof. I have said that it can be seen. Moreover, no accurate statistical expression of it is possible. The public returns tell us how many ships are built and registered in England every year. They do not tell us how many are built on each river. They do not include tonnage which is built but not registered, of which (in steam tonnage especially) the quantity is often large. For these reasons the public records do not enable any accurate statistical comparison between river and river. Unhappily the statistical proof of the fact is needless. The silent yards, the increased pauperism, the destitution, the able-bodied skilled-labour emigration from the district, which has taken place this year, are proofs of the fact more conclusive and affecting than statistics could supply.

There are some obvious causes which might occasion the failure of any industry which my inquiries assure me have not produced the effect under consideration. I will mention some of these. The decline of shipbuilding on the Thames has not arisen—

1. From any inferiority in the skill of its labourers. For a long period their reputation was unrivalled, and there is no reason whatever for supposing that their skill has undergone any diminution. On some of the northern rivers work is now produced which is not inferior to Thames work, but on none is it excelled.

2. Neither, as certainly, can the decline of shipbuilding on the Thames be attributed to inadequacy of capital among the builders.

The enormous size of some of the establishments, and the completeness of their economical arrangements, are conclusive evidence on this point.

3. From a perusal of Table I, which is annexed, it is apparent that the decline is not explained by the slightly higher cost of materials on the Thames compared with other rivers.* In the following articles, there is no appreciable difference between the price on the Thames, the Wear, and the Clyde:—Teake, yellow pine, canvas, rope, yellow metal sheathing, and nails. The price of angle iron is the same on the Clyde as on the Thames, but rather cheaper on the Wear. Iron plates are slightly dearer on the Clyde than on the Thames, the Wear being cheaper than either. Elm timber is marked higher on the Thames than on either the Clyde or Wear, but there is no reason why it should be so, and if the demand for the article on the Thames were large enough it could be sold there as cheaply as on the northern rivers. Anchors and chains are not manufactured on the Thames to any large extent. They are cheapest on the Wear, 6*d.* per cwt. dearer on the Clyde, and 1*s.* 6*d.* per cwt. dearer on the Thames. The price quoted is for the whole quantity of anchors and chains that a ship requires, technically called an outfit. The greatest difference shown in the table is in the price of coal, varying from 2*s.* 6*d.* per ton to 15*s.* on the worst kind, and from 4*s.* to 20*s.* on the best. The price on the Clyde is much lower than on the Thames, but higher than on the Wear. Notwithstanding the unfavourable contrast borne by the Thames on the article of coal, the general result of this comparison of the price of materials on the different rivers, satisfies me that this is inadequate as an explanation of the destruction of an industry. These differences are disadvantages only, against which it would be easy to conceive compensating advantages.

I conclude, therefore, that neither the quality of its work, nor inadequacy of capital, nor the rather higher cost of materials on the Thames, explain the decline in its shipbuilding trade. I will now show to what I think it is to be attributed.

1. The most important and conclusive explanation I have met with is supplied by the annexed Table II, by which is shown the daily rate of wages on the Thames, Wear, and Clyde, of carpenters, joiners, platers, caulkers, rivetters, painters, riggers, sailmakers, boilermakers, engineers, turners, and pattern-workers. The cost of one day's labour from these combined crafts is, on the Thames, 72*s.*; on the Clyde, 58*s.* 8*d.*; on the Wear 55*s.* 8*d.* The Thames price is 22·72 per cent. higher than the Clyde, and 29·34 per cent. higher

* I have taken the prices of materials and wages on the Wear and on the Clyde, as fairly indicating the terms on which other English and Scotch rivers compete with the Thames.

than the Wear. I submit to the Section that this single fact is an explanation of the decline of shipbuilding on the Thames so conclusive as rather to suggest a demand for another explanation, viz., how the trade was carried on until recent time with such a disadvantage. The answer is simple. It was not a profitable trade. One after another the builders failed, and some more than once, and their estates usually yielded very small dividends. Moreover, it was what I may call a hot-house trade. The buyers were not individuals spending their own money, looking for the cheapest market, and taking the benefit of competition therein; but, on the contrary, they were chiefly Governments (British and foreign) and large companies, often highly subsidised and rich, with whom price, and an adequate return to be earned thereon, were not primary considerations. While the Thames workmanship was, or was thought to be, unrivalled, the buyers I have described contracted almost exclusively with Thames builders, who obtained high prices in the absence of competition from other rivers, and so far were helped to pay such wages as Table II shows. But, as already named, Thames workmanship can now be equalled both on the Clyde and Mersey, on the Tyne and Wear; our own and other Governments and the large companies no longer restrict their contracts to the Thames; in such competition the lowest price wins. The Thames has lost—lost inevitably—with its labour rate 22·72 per cent. above the Clyde, and 29·34 per cent. above the Wear. There is good reason for believing, moreover, that this difference in the rate of wages is aggravated by the extent to which work is done by the “piece” in the northern yards. Iron-work on the Clyde is nearly all so done, and I am informed that on the Wear nine-tenths of it is so done.

2. I have made inquiry as to the establishment charges on the Thames compared with those on northern rivers. By these I mean salaries of foremen, storekeepers, clerks, draughtsmen, and managers; also rents, taxes, and other general charges incident to the business of shipbuilding. I can produce no figures on this point; but a competent authority on the Thames, who is well acquainted with the conditions of shipbuilding in the north, assures me that it would not be an unreasonable estimate to reckon the establishment charges on the Thames at double those on the northern rivers. If this estimate is even half true, it is a further explanation of the decline of shipbuilding on the Thames.

3. Some further disadvantage to this industry on the Thames has accrued through the comparative disuse of wood in the construction of ships. Formerly all vessels were built of wood. Coal and iron, and the cost thereof, were not then very important items in their construction. Now, a steamer built of wood is a rarity, and

nearly all large sailing vessels are built either entirely of iron, or of iron in the interior with a wooden skin. These last are called "composite" vessels. It is apparent how the disuse of wood, and the greatly increased use of iron, favours the rivers in close proximity to the banks of which iron is manufactured, and where coal—so important an item in all work with iron—is also found proximate and therefore cheap.

4. The immense increase in steam vessels has further tended to the disadvantage of the Thames. A steamer is so many tons of iron plus coal and labour. Thus the recent demand has been for that in the supply of which the northern rivers had the greatest advantage over the Thames; as we have seen, they have iron rather cheaper, coal and labour much cheaper. Moreover, the use of steam is not now limited to mail packets and passenger boats. All kinds of ordinary cargo—such as coal, iron, grain, and wood—are now largely carried by steamers. For such purposes the high finish of Thames engine makers is not necessary. Adequate strength for the hard work to be done is the quality desiderated. This is the class of steamer which has increased so largely, and the Mersey, Clyde, Tyne, and Wear have supplied them, of quality quite adequate to their work, at 15 to 30 per cent. less than they could have been obtained for on the Thames. These are the reasons why the Thames yards are idle, and that orders very naturally travel northward.

With regard to the chief reason, it is most natural to ask why Thames wages did not fall with the decline of trade until such a level had been reached as would have enabled Thames masters to compete successfully with other rivers. The "Unions" seem to have decreed otherwise. They fixed a limit below which wages ought not, in their opinion, to fall. They succeeded thus far. Wages remain nominally high. But there is no work: the trade is destroyed. It is perhaps an extreme illustration of what happens when the men become masters.

APPENDIX.

I.—*Prices of the undermentioned Materials on the Thames, the Wear, and the Clyde in 1869.*

	Thames.	Wear.	Clyde.
	£ s. d.	£ s. d.	£ s. d.
Angle iron per ton	7 5 —	6 17 6	7 5 —
Plates „	8 5 —	7 17 6	8 10 —
Rivets „	12 10 —	10 2 6	10 — —
Teake per load	12 — —	12 10 —	12 10 —
Elm „	6 — —	4 10 —	5 5 —
Yellow pine „	3 15 —	3 15 —	3 15 —
„ metal per lb.	— — 7	— — 7	— — 7
Canvas per yard	— 1 6	— 1 6	— 1 6
Rope per cwt.	2 — —	1 18 —	2 — —
Coal per ton	15s. to 20s.	2s. 6d. to 4s.	5s. to 12s. 6d.
Anchors and chains per cwt.	14s.	12s. 6d.	13s.

II.—*Rate of Wages in the Shipbuilding Trades on the Thames, the Wear, and the Clyde in 1869.*

Trades.	Thames.	Wear.	Clyde.
	s. d.	s. d.	s. d.
Carpenters per day	7 —	5 —	4 6
Joiners „	6 —	4 6	4 6
Platers „	7 —	4 6	4 8
Caulkers „	6 —	5 —	3 8
Rivetters „	6 —	4 2	3 8
Painters „	5 6	4 6	5 —
Riggers „	5 6	6 —	4 4
Sailmakers „	5 —	5 —	4 2
Boilermakers „	6 —	4 3	5 8
Engineers „	6 —	4 3	4 4
Turners „	6 —	4 3	5 4
Pattern-workers „	6 —	4 3	4 10
Total	72 —	55 8	58 8

Note.—The Thames rate of 72s. is 22·72 per cent. higher than the Clyde rate, and 29·34 per cent. above the Wear rate.

On the ECONOMIC PROGRESS of NEW ZEALAND.

By ARCHIBALD HAMILTON, ESQ.

[Read before Section F, British Association, at Exeter, August, 1869.]

THE colony of New Zealand was founded in the year 1840. Prior to that date a number of Europeans, consisting of missionaries, whalers, and traders, had settled in various places, but chiefly at the Bay of Islands, where a considerable trade with New South Wales had been established. Besides which the New Zealand Company had, a year previously, anticipated the action of the Government and acquired land by purchase from the natives, with a view to independent colonisation.

Governor Hobson, acting under instructions from home, entered into a treaty, in 1840, with the principal natives and chiefs, whereby the sovereignty of the north island was ceded to the Crown, while that of the south (or middle) island was proclaimed by right of discovery.

In terms of the treaty the natives became subjects of the Crown—"the Queen of England extending to them her royal protection, "and imparting to them all the privileges of British subjects;"—in point of fact, we engaged to maintain law and order among the various tribes, and between them and the settlers; as well as to introduce commerce and civilisation, for which the natives were eager, having experienced the benefits thereof in the trade carried on at the Bay of Islands.

Another provision of the treaty was, that it guaranteed to the chiefs and tribes, individually and collectively, undisturbed possession of their land; while the Crown acquired the exclusive right of pre-emption over such land as the natives might at any time wish to sell. The Government thus became the sole buyers of land from the natives, which Government alone could resell to the colonists, —neither could the latter lease land from the natives, except through Government.

It is unnecessary that I should enter into the disputes of the New Zealand Company with the Governors and Colonial Office. The Company surrendered their charter in 1850. A constitution and representative institutions were granted to the colonists in 1852, with the express reservation, however, by the Imperial Government, of all control over native affairs. This continued until 1863, when the colonists were reluctantly induced to undertake that responsibility. Until then, the Crown pre-emptive rights

remained in force, subject to the direct control of the Imperial Government through the Colonial Governor; but another system has, since 1863, been adopted, to which I shall presently allude.

During the thirty years of its existence the progress of the colony has been unequalled, except, perhaps, by Victoria. The exports which in 1841 were 11,000*l.*, and in 1842 19,000*l.*, steadily increased to 4,650,000*l.* in 1867. The following table will show the progress of imports and exports, divided for convenience into averages of years:—

Average of	Total Imports.	Total Exports.
	£	£
4 years, 1841-44.....	139,000	33,000
5 „ „ '45-49.....	193,000	77,000
5 „ „ '53-57*	801,000	336,000
5 „ „ '58-62.....	2,273,000	1,078,000
5 „ „ '63-67.....	6,172,000	3,953,000
1 year, 1867	5,345,000	4,645,000

* 1850-51 returns wanting.

Gold now enters largely into the exports:—

	£
From 1857 to December 1866, the amount exported } was	11,800,000
During the year 1867 it was.....	2,700,000
Total exported from New Zealand to } December, 1867	14,500,000

Of this only 81,000*l.* was from the north; but during last year rich gold mines were discovered in the neighbourhood of Auckland, which are already being rapidly developed; and for the quarter ending 31st March, 1869, they yielded 131,273*l.* Being from quartz veins, these mines afford every prospect of steady employment and of becoming a regular branch of industry; besides which there are continual discoveries of gold fields in the north island, and the auriferous area is increasing every day.

The agricultural and pastoral, as might be expected, exhibit a growth corresponding with the commercial returns.

Year.	Acres Fenced.	Sheep.	Cattle.	Horses.
1851.....	41,000	233,000	35,000	3,000
'58.....	236,000	1,523,000	137,000	15,000
'61.....	410,000	2,761,000	193,000	28,000
'64.....	1,072,000	4,937,000	250,000	49,000
'67.....	3,456,000	8,419,000	313,000	66,000

In Appendix, Table Nos. I and II, will be found a more complete statement of commercial, agricultural, and pastoral returns, distinguishing the north island from the south.

The revenue and expenditure of the colony, for five years ending 1866, have been as follows :—

Year.	Gross Revenue.	Expenditure.
	£	£
1862.....	1,886,006	1,118,177
'63.....	1,380,836	1,757,092
'64.....	1,608,841	1,860,980
'65.....	1,525,827	2,906,332
'66.....	1,978,711	3,293,250

In the Appendix (Table No. III), is a statement showing the revenue from the years 1853-67, under the heads ordinary, territorial, and incidental—distinguishing the revenue of the north island from that of the whole colony. The ordinary revenue amounts to a tax of 5*l.* 12*s.* per head of the European population, exclusive of local burdens ; and, owing to the expenses of the wars with the natives, the colonial debt, exclusive of provincial loans, amounts to 3,500,000*l.*, with an annual charge of 242,000*l.*—say 2*l.* 1*s.* 2*d.* per head of the European population.

According to the last colonial census, the European population, in 1867, stood thus :—

	Males.	Females.	Children 15 and under.	Total.
North Island.....	28,856	19,179	31,878	79,913
South „	62,728	28,720	47,307	138,755
Total	91,584	47,899	79,185	218,668

Appendix, No. V, is a table showing the distribution of employments among the white population—distinguishing the north island from the whole colony.

Appendix, Table No. IV, shows the number of emigrants from this country to New Zealand, from which it will be seen that the colony has relieved us from 111,306 of our superabundant population, independently of those who have re-emigrated thither from Australia.

Contrasted with these gratifying symptoms of progress, is the melancholy decrease in the native population, as shown in the subjoined estimates of their numbers :—

	Males.	Females.	Children 14 and under.	Total.
1848, estimated	—	—	—	100,000
'58 " 	31,667	24,303	—	56,049
'67 " 	15,432	12,780	10,323	38,535

It is to be observed that the whole native population resides in the north island, except 1,500 to 2,000, who are resident in the south.

On examining all the returns I can find of native population, which distinguish ages and sexes, I have arrived at the following comparative results; native children being taken at 14 years and under, and Europeans at 15 and under:—

	Men.	Women.	Boys.	Girls.
Proportion of natives per 1,000 ...	433	326	137	104
" Europeans " ...	420	215	184	181

These figures indicate a population decreasing from natural causes, as compared with one that is increasing; the preponderance of adult males being even greater among the European than the native race.

Enough has been shown to prove the importance of the colony; but its rapid growth, hitherto, is a mere indication of its capabilities. Possessed of a fine climate and a fertile soil, well watered, and free from drought; provided with ample coal fields, the working of which is only just begun; and, independently of gold, with mineral wealth as yet almost untouched; indented with harbours, and having a geographical position of singular advantage for commerce: possessed, I say, of all these great natural resources, there can be no question as to the destiny in store for New Zealand. And, considering the critical state of our relations with the colony, I now propose to make a few remarks on the general subject of colonial policy, and to apply these to the case of New Zealand.

There can be no doubt that our relations with the colonies were much changed—1st, by the adoption of free trade, when the protective duties ceased, by which the United Kingdom and the colonies reciprocally favoured their produce and our manufactures; and, 2ndly, by the representative institutions and self-government, which were soon afterwards conceded to the colonies. The old policy of regulating and controlling everything from the Colonial Office in Downing Street having ceased, it followed that the imperial

expenditure on behalf of the colonies should cease also, as soon as each colony attains the power of protecting itself. Such appears to have become the settled policy of this country; and it has become an almost equally settled opinion, that colonies which have reached maturity should be encouraged to become independent States—so that, in such cases, the chief duty of the Colonial Office would seem to be, carefully to preserve such relations with the colonies as shall admit of the inevitable separation taking place in an amicable spirit. These opinions, though perfectly just in the main, I submit, require some limitation and are apt to be pushed to extremes. There are those indeed who advocate throwing off the colonies, as mere encumbrances and so many sources of expense.

It is argued that we should at all events retain our trade with the colonies, whether we cut them adrift or no; and in a recent despatch, one ground assigned by the Colonial Office for refusing aid to New Zealand is, that the Imperial Government derives no tribute from the colony. This was no hasty remark to a deputation, but occurs in a despatch deliberately concocted in the Colonial Office. For my part, I regard it as the merest assumption that we should fully preserve our trade in the case supposed. So long as they continue ours, the colonies are identified with the policy of free trade: but if independent, no one can foresee what commercial alliances and restrictive tariffs they might adopt. Take the case of the United States. Vast as our trade with that country is at present, there is no doubt our exports would be much increased were the Americans to adopt free trade, instead of their present protective, and in many cases prohibitive, duties. In confirmation of this, I find that in 1861, when the last colonial census was taken, our exports to the North American colonies amounted to 31s. 2d. per head of their population; whereas to the United States it was only 13s. 11d. per head, slaves inclusive; and 15s. 11d. per head exclusive of slaves. I take the year of the American census, 1860; one favourable for comparison, being prior to the civil war. Now the United States is incomparably a wealthier country than our American colonies, and the obvious inference is, that with free trade our exports to the States ought to exceed per head the rate of the colonies, instead of being only one half.

As to the question of drawing tribute from our colonies, surely it was settled a hundred years ago, when the United States declared their independence.

It would be difficult to say what is the money value of a colony; but instead of tribute, I should rather be inclined to value it by the amount of our exports thereto. Now the Australian and New Zealand colonies, all established within fifty years, took nearly 15 millions sterling of our exports in the year 1866; and this

amount, in some shape or other, went to swell the aggregate income of the United Kingdom. In the year 1866, New Zealand took 2,737,700*l.* of our exports, being 10*l.* 12*s.* 10*d.* per head of the entire population. For further particulars, see Table No. IV, in Appendix.

In the event of war, it would surely be an advantage to have so many colonial ports open to us all over the world, which, if independent, would become neutral ports; a point of the utmost importance, considering that steamers must play the chief part in the next maritime war. In the case of New Zealand this becomes of vital consequence, on account of its coal mines, as well as its position and numerous harbours. If our colonies are prematurely cast off, we shall assuredly lose much of their sympathy, and with it all chance of assistance in case of need.

I shall not here dwell upon the indirect advantages which we derive from our colonies; none the less real because they have been described as mere sentimental considerations; but indeed the sympathy of the colonists is to be valued for other reasons, not altogether of a sentimental nature. Not only do the colonists look upon England as "Home," and maintain connections which are constantly being renewed and strengthened, but many of the more successful among them are induced to return to England with the fortunes they have accumulated in the colonies, to benefit the people of this country by their expenditure.

Furthermore, the value of colonies as fields for emigration must not be overlooked. Of late years, and until quite recently, we have not heard much of our "surplus population:" in a great measure because of the relief which has been afforded by emigration, thereby not only decreasing the pressure at home, but creating employment for those who remain behind. During the last forty-four years Australia and New Zealand have taken off 956,457—nearly one million—of our surplus: and this without expense to the mother country.

So far, therefore, from regarding our colonies as encumbrances, I contend rather that we should continue to plant new colonies, until the great continent of Australia, at present only partially occupied, shall have been completely fringed round with British settlements. And if, in fifty years hence, we shall thereby have added another 15 millions per annum to our aggregate income, and found profitable employment for another million of our surplus hands—surely the expense of founding, and helping for a time to maintain, these future colonies, will have been well laid out. At the same time, I fully admit that as colonies gain strength they should defray all charges of their own government and defence, and when they reach maturity they are undoubtedly entitled, if so inclined, to become sovereign States. All that I contend for is,

that these general principles, however sound in the abstract, cannot be indiscriminately applied. If we would avoid harshness and injustice, regard must be had to existing circumstances in various colonies, which have arisen and are due to an opposite policy, which we have ourselves heretofore enforced and acted upon. But, in truth, no general rule can be laid down, as the circumstances of each colony differ from those of others. For example, the Dominion of Canada, though without an internal enemy, borders on the United States, and may become involved in our quarrels. Australia has nothing to fear from neighbours, aboriginal or civilised. On the other hand, the Cape has had, and New Zealand now has, serious difficulties with the aborigines. In the colonies of Ceylon, Singapore, and Hong Kong, there are simply no British settlers, in the ordinary sense of the word.

I submit, therefore, that we cannot adopt for our policy the indiscriminate withdrawal of all assistance from our colonies. We must decide each case according to its merits, and we must scrupulously observe every reasonable obligation to the colonists, while it is our sacred duty to fulfil every engagement with the natives.

To apply these general principles to the case of New Zealand. It appears to me the colonists have great reason to complain of the treatment they have received; and of this any candid person, who will look into the matter, can satisfy himself. As a consequence the relations between the Colonial Office and the colony have become truly unfortunate, being little better than snubbing on the one side and snarling on the other. In theory, no doubt, our minister for the colonies rules the Colonial Office, and is responsible to Parliament and the public. But the fact is, what with the frequent changes of ministry, the pressure of business on the House of Commons, public attention absorbed in important questions nearer home, added to the general ignorance of and indifference as to colonial matters; it so happens that the Colonial Office is, for all practical purposes, absolutely free from check or control. The officials deal as they please with the interests of communities which are destined ere long to become powerful empires. Occasionally, therefore, we have been startled by finding ourselves involved in an expensive war, possibly of doubtful justice, but certain to yield us no credit; and at present we seem bent on ridding ourselves of these annoyances at all hazards, without reference to justice or sound policy.

I can but hastily glance at the wars with the Maories, and the interminable disputes to which they have given rise. I have already stated that the affairs of the colony were controlled from home until 1852, when a representative constitution was ceded; but even then, the conduct of native affairs was jealously reserved by the Imperial

Government. Most important of all, the Crown reserved the monopoly of buying land from the natives. The purchases were made often at a few pence per acre, and resold to the colonists, first at 20s. per acre, and subsequently at an upset price of 10s. per acre. With a shrewd and intelligent people like the Maories, this could not fail to breed discontent; they formed among themselves a land league, and the war which began in 1860, and has continued with intervals ever since, originated in a dispute about a Government purchase of land. Speaking broadly, I may say that all hostilities with the natives since 1844 have been, in one way or another, traceable to disputes about land.

In consequence of these troubles, the Imperial Government had several times pressed the colonists to undertake the management of native affairs, which, however, the latter declined. But in 1863, when the responsibility was eventually, though most reluctantly, accepted by the colonists, "in consideration of the thoroughly efficient aid which Her Majesty's Government was then affording for the suppression of the native rebellion, and relying upon the cordial co-operation of the Imperial Government for the future." The thoroughly efficient aid referred to, consisted of an army of 10,000 soldiers, which, together with a naval brigade and colonial levies, made up a total force of from 15,000 to 17,000 men. The colony raised a loan of three millions to contribute their share of the expense, in the full belief that here was a great opportunity to convince the natives of the utter hopelessness of war with the white man: and that by cutting military roads through the island, the interior resources of the country would be opened out, and peace rendered permanently secure. Unfortunately, however, this imposing force accomplished nothing. No roads were opened, and no serious impression was made on the enemy—insignificant in point of numbers as they were; for it is believed that there were never more than 2,000 or 2,500 men in arms, opposed to our 17,000. In our military annals there are several disastrous chapters; but with the full recollection of Walcheren, New Orleans, Cabul, and the Crimea, I venture to say that nothing has been so ignominious as the result of our operations in New Zealand. War, it is true, was carried on by the generals in command with great vigour, though not against the Maori, but against the Governor, whose province was invaded with considerable success. Fortunately for those implicated there was no great sacrifice of life, so that their doings escaped investigation, but the expenditure of money was enormous, and the proportion borne by the colony all but ruinous; while it proved so distasteful to the Home Government, that a demand was made on the colony for payment in future at the rate of 40*l.* per soldier per annum. This the colonists declined, and in so doing they were right. To be effective,

the military force should obviously be at the disposition of the Colonial Government; but as the British army can be expected to act only under orders from home, the colonists were in fact asked to pay for soldiers over whom they had no control; and they had already suffered enough from the effects of divided counsels and disputes between the Governor and commanders. The troops were accordingly removed, all save one regiment, which is now under orders to leave, and will have left at a most critical period. The services of this regiment by express orders from home, have been limited to garrisoning the towns; this, however, has set free the colonial levies to meet the enemy in the field, or follow him into the bush. Without entering into the question as to whether this one regiment should be allowed to remain, it is at least obvious that one time may be more fitting for its removal than another; and its withdrawal in the very crisis of the war, it is feared, may have a serious effect on the neutral and wavering portion of the natives; the proposal has been successively disapproved by the colonists, the Governor, the Commander of the forces, the Admiral on the station, and finally by the Duke of Cambridge; nevertheless positive orders have gone from the Colonial Office for its removal, and by this time it may be on its way home.

The last request on behalf of the colonists is that the Imperial Government will assist them by guaranteeing a loan of a million and a half, in order that they may raise and maintain a force specially disciplined and trained for the peculiar warfare. It is believed that 2,000 men will suffice to reduce the hostile natives to order, a task in which 10,000 regulars failed, but it is estimated this force must be maintained for seven years at an expense of 200,000*l.* per annum. By these means it is believed the natives will at length become convinced of the hopeless struggle in which they have embarked. The neutrals will become friendly, and the Maories themselves will put down the hostile faction. This moderate request to have a loan of 1½ millions guaranteed has been declined, and the colonists have been in substance told by the Colonial Office, that if the settlers in the north island are driven into the sea, they must accept their fate. It is a matter of importance to the colonists, if they are to be cut off from substantial aid of any kind, that they shall be enabled to raise funds on moderate terms—say at 3 per cent. instead of 6 per cent. or upwards: since we must recollect that already their taxation amounts to 5*l.* 12*s.* per head, exclusive of local burdens, as compared with 2*l.* 7*s.* 9*d.* in England, also exclusive of local taxation.

The guarantee would eventually have cost the Imperial Government nothing, but it would have been a trifling consideration to a country like this, even if we had to contribute the amount outright,

in the honorable fulfilment of our engagements to the natives, no less than to the colonists. The money assuredly would be well laid out, in comparison with what we have recently expended in the maintenance of our honour in Abyssinia. Nor would it be without precedent: we have recently guaranteed Canada—to say nothing of Greeks and Turks—the recollection of which cannot but leave a bitter sense of injustice on the minds of the New Zealanders.

It would be well to consider what is likely to be the result of the Colonial Office leaving the natives and the colonists to their fate. The first effect of this narrow and selfish policy is already becoming manifest. The settlers in the south island, where it may be said there are no natives, already begin to urge, “if this be no affair of the Imperial Government, neither is it of ours—let us have separation, and leave the settlers in the north to fight their own battles.”

This is the more significant because the Colonial Parliament consists of forty-three members from the south, against thirty-three members from the north island, including four Maori representatives. On the other hand, the effect of this on the natives must be taken into account: they are keen politicians, and perfectly understand the discussions which take place in the Colonial Parliament and newspapers. The reduction of the regular army to one regiment has already been the means of prolonging the war by strengthening the hostile section of the natives; and if the colonists in the north are hereafter to depend on themselves alone, there is too much reason to fear that the neutral Maories will become hostile, if indeed there should not be a general combination of the native tribes; even now the neutrality is of a very questionable description.

As already said, the white population of the north island is 80,000 against 38,000 Maories. And while I utterly disbelieve the possibility of the natives driving the colonists into the sea, still the struggle would by no means be so unequal as those numbers would imply. Of the native population there are 15,000 adult males, and, considering the assistance rendered by their women in war, I shall allow only 1,000 for aged men, leaving equal to 14,000 fighting men, innured to bush warfare: for commissariat they are able to subsist, as their ancestors did, on fern roots, everywhere provided by nature. Of the colonists there are in the north 28,856 adult males, though by no means all fighting men. Of these 7,657 are upwards of 40 years, leaving 21,200 of the fighting age, say from 15 to 40 years. Having regard to the Table No. V of occupations, it would perhaps be no extravagant supposition that two-thirds of these never had a rifle in their hands; and in fact 5,550 of them reside in the four principal towns, many of whom could not possibly be spared from their daily avocations. Besides which, we must bear in

mind that a still greater number of the colonists have no special tie to the north island, and may be expected in any extremity to remove to the south island or to Australia. Taking everything into consideration, I therefore think that from the 21,200 men of the fighting age, we must strike off one-third as unfit for service in the field, unable to leave their employment, or likely to leave: there would thus remain 14,000 colonists as against an equal number of natives effective. To recapitulate this estimate shortly:—

	Males.
NATIVE ADULTS in North Island	15,000
Deduct for aged men, regard being had to the services rendered by their women	1,000
Effective Warriors.....	<u>14,000</u>
EUROPEAN ADULTS in North Island	28,856
Deduct, above 40 years of age.....	7,656
„ unfit for service and likely to leave	7,000
	<u>14,656</u>
Capable of bearing arms	<u>14,200</u>

Nevertheless, under any circumstances, even if abandoned by the Imperial Government, and by their brethren in the south, I have no fear that the colonists will be driven into the sea; outlying settlements may be abandoned, and the settlers be driven into the towns, the fruits of their industry destroyed, and their homesteads burnt down; our feelings may be harrowed from time to time, as they have been already, by news of women and children ruthlessly massacred; and we may have to contrast the rapid progress of the last thirty years with its destruction still more rapid; but in the end the European will no doubt prevail, though it can be only at the frightful cost of a war of races, ending in Maori extermination.

It is frequently asserted that, under any circumstances, the natives must disappear before the advance of European civilisation; that they are a doomed race. For the sake of humanity, I trust that some means may be found of terminating the present state of chronic hostilities, so that there may still be a fair opportunity for preserving by far the finest and most intellectual race with whom Anglo-Saxon colonists have yet come into contact. There is ample room for both: no wide extent of country is required for hunting ground: and a glance at the map will show how small a portion of the island has been yet appropriated.

It is admitted on all sides that the colonists have been most anxious to live in peace with the entire race; as in fact they have always done with the friendly tribes, hitherto about one-third of the native population. The Colonial Government expends about 60,000/.

annually for native purposes ; the natives have equal electoral privileges ; and four Maori constituencies have been created, which send four of themselves to the House of Representatives. When the conduct of native affairs was forced upon the Colonial Government by the Colonial Office in 1863, the Government ceased to be the sole buyers of land from the natives ; the monopoly, though no doubt benevolent in its intention, having been found mischievous in its results ;—and in its stead native land courts have been instituted, presided over by Europeans, but assisted by native assessors. After investigation of title, crown grants are issued, and the land is dealt with as the owners (whether white or coloured) think proper. These courts have been successful so far, and are valuable as a means of individualising titles, instead of the tribal or communistic tenure which has hitherto obtained among the natives ; and the courts are thereby gradually sapping the influence of the chiefs.

Those of the friendly natives who have availed themselves of the land courts have benefited greatly by the same, and have sold or leased portions of their land to their entire satisfaction. Many of their town and suburban reserves have become extremely valuable ; and one small tribe is said to be in receipt of 26,000*l.* a-year for leased land. By these and similar means for the promotion of their welfare, and especially by education, it is hoped that the decrease of the native race may still be arrested. But for these endeavours to be successful, it is necessary, by a sustained effort, to put an end to the present chronic state of hostilities—an object which can only be attained by convincing the natives, once for all, of the utter hopelessness of their attempts to drive the white man from the island.

I earnestly trust the policy of the Colonial Office may be reversed while there is yet time. It is neither consistent with honor or sound policy, still less with justice and humanity, that the two races in the north island should be left to a life and death struggle. We owe a duty to the native, no less than to the colonist, and cannot wash our hands of the business, if we would ;—the attempt to do so will assuredly lead to a war of extermination, and the blood of the Maori will be upon our conscience :—while as regards the colonists, we shall leave to our successors an inheritance of hatred and ill-will, such as we have, even until our own time, experienced from the United States.

APPENDIX.

I.—Commercial Returns of New Zealand.

Year.	Imports.			Exports.		
	North.	South.	Total.	North.	South.	Total.
	£	£	£	£	£	£
1853....	451,400	146,400	597,800	264,900	38,400	303,300
'54....	660,200	231,000	891,200	278,000	42,900	320,900
'55....	585,100	228,400	813,500	250,300	115,600	365,900
1856....	477,200	233,700	710,900	209,800	108,600	318,400
'57....	610,900	382,100	993,000	199,900	169,500	369,400
'58....	661,700	479,600	1,141,300	217,500	240,500	458,000
'59....	806,300	744,700	1,551,000	256,600	294,900	551,500
'60....	768,100	780,200	1,548,300	250,400	338,600	589,000
1861....	937,400	1,556,400	2,493,800	212,500	1,157,700	1,370,200
'62..	1,273,300	3,352,800	4,626,100	266,500	2,156,200	2,422,700
'63....	1,487,700	5,537,000	7,024,700	374,900	3,110,500	3,485,400
'64....	2,845,900	4,154,700	7,000,600	638,200	2,763,500	3,401,700
'65..	2,568,000	3,027,000	5,595,000	434,400	3,278,800	3,713,200
1866....	2,003,300	3,891,600	5,894,900	515,600	4,004,500	4,520,100
'67...	1,469,200	3,875,400	5,344,600	570,700	4,074,000	4,644,700

II.—Agricultural and Pastoral Returns of New Zealand.

Year.	Acres Fenced.			Sheep.		
	North.	South.	Total.	North.	South.	Total.
1851...	26,800	13,800	40,600	77,800	155,200	233,000
'58..	148,100	87,400	235,500	230,800	1,292,500	1,523,300
'61....	230,600	179,200	409,800	638,800	2,122,800	2,761,600
'64....	330,300	742,100	1,072,400	1,034,100	3,903,200	4,937,300
'67....	740,200	2,715,400	3,455,600	1,787,700	6,630,900	8,418,600

Year.	Cattle.			Horses.		
	North.	South.	Total.	North.	South.	Total.
1851....	23,700	11,100	34,800	1,900	1,000	2,900
'58....	71,600	65,600	137,200	7,500	7,400	14,900
'61....	96,300	97,000	193,300	12,800	15,500	28,300
'64....	110,300	139,500	249,800	18,300	31,100	49,400
'67....	124,500	188,300	312,800	25,500	40,200	65,700

III.—*Revenue of New Zealand.*

Year.	North Island only.			Whole Colony.			
	Ordinary.	Territorial.	Total.	Ordinary.	Territorial.	Incidental.	Total.
	£	£	£	£	£	£	£
1853....	64,000	53,000	117,000	80,000	67,000	3,000	150,000
'54....	87,000	114,000	201,000	111,000	181,000	1,000	293,000
'55....	86,000	33,000	119,000	111,000	62,000	2,000	175,000
1856....	80,000	29,000	109,000	108,000	76,000	4,000	188,000
'57....	104,000	38,000	142,000	154,000	91,000	3,000	248,000
'58....	116,000	50,000	166,000	179,000	162,000	1,000	342,000
'59....	125,000	56,000	181,000	208,000	242,000	10,000	460,000
'60....	130,000	61,000	191,000	233,000	216,000	16,000	465,000
1861....	156,000	75,000	231,000	324,000	347,000	20,000	691,000
'62....	175,000	57,000	232,000	508,000	607,000	71,000	1,186,000
'63....	207,000	48,000	255,000	743,000	524,000	114,000	1,381,000
'64....	306,000	80,000	386,000	816,000	715,000	78,000	1,609,000
'65....	385,000	80,000	465,000	937,000	500,000	89,000	1,526,000
1866....	378,000	62,000	440,000	1,086,000	776,000	116,000	1,978,000
'67....	376,000	51,000	427,000	1,226,000	562,000	77,000	1,865,000

IV.—*Showing Exports and Emigration from United Kingdom to New Zealand.*

Year.	Exports.	Emigrants.
	£	No.
1840.....	—	1,458
1841.....	—	3,901
'42.....	—	3,064
'43.....	—	343
'44.....	—	68
'45.....	—	14
1846.....	—	6
'47.....	—	316
'48.....	—	751
'49.....	—	1,825
'50.....	102,200	2,005
1851.....	146,800	2,677
'52.....	334,200	1,718
'53.....	202,800	1,420
'54.....	384,100	1,050
'55.....	328,900	2,301
1856.....	309,600	4,004
'57.....	460,300	3,807
'58.....	532,600	5,872
'59.....	842,300	8,558
'60.....	870,600	5,242
1861.....	1,011,600	4,555
'62.....	1,653,900	11,440
'63.....	2,694,900	13,919
'64.....	3,259,200	11,970
'65.....	2,607,000	7,037
1866.....	2,737,700	4,298
'67.....	2,779,500	3,984
'68.....	—	3,703
Total	—	111,306

V.—Occupation of Whites in New Zealand, according to the Colonial Returns, 1867.

Occupations.	North Island.	South Island.	Total.
Trade, &c.	3,068	7,126	10,194
Agriculture, &c.	7,104	11,759	18,863
Mechanics	5,484	8,211	13,695
Mining	1,813	18,559	20,372
Professions	996	1,214	2,210
Labourers	5,400	7,625	13,025
Domestic.....	2,571	4,688	7,259
Miscellaneous	2,056	4,827	6,883
Mariners	1,439	2,098	3,537
No occupation	49,982	72,648	122,630
Total	79,913	138,755	218,668

VI.—Ratio of Distribution of Occupations in New Zealand.

Occupations.	North Island.	South Island.	Total.
Trade, &c.	3·82	5·13	4·66
Agriculture, &c.	8·87	8·46	8·63
Mechanics	6·85	5·90	6·26
Mining	2·26	13·35	9·32
Professions	1·24	·87	1·01
Labourers	6·75	5·49	5·96
Domestic.....	3·21	3·37	3·32
Miscellaneous	2·56	3·47	3·15
Mariners	1·78	1·51	1·62
No occupation, women and } children	62·66	52·45	56·07
Total	100·00	100·00	100·00

The PRESSURE of TAXATION on REAL PROPERTY. By FREDERICK PURDY, ESQ., Principal of the Statistical Department, Poor Law Board, and one of the Honorary Secretaries of the Statistical Society.

[Read before Section F, British Association, at Exeter, August, 1869.]

CONTENTS:			
	PAGE		PAGE
I.—The Pressure	308	III.—Conclusion	319
II.—The Growth of the Property under Pressure	314	APPENDIX	320

I.—*The Pressure.*

THE question of the fiscal pressure caused by the incidence of imperial and local taxation on real property is no new topic in this country. In 1846 the House of Lords appointed a select committee to inquire into the “Burdens affecting real property.” This committee, of which Lord Beaumont was the chairman, gathered from various sources a large body of information, and made in the same session a rather brief report to the House upon the voluminous evidence which was subsequently published. A draft report which Lord Monteagle, one of the members, had drawn up, was not accepted; it was, however, printed as a separate paper by the House of Commons in the same year.

Both documents have rather an historical than practical interest for us in the present day. Our imperial financial policy has materially changed since 1846, and the local burdens of that time are quite dwarfed in absolute amount by recent growths in the same field. It, therefore, appeared a useful task to ascertain the taxation laid on real property at this moment with the greatest precision that authentic records render possible. I propose to do this *statistically*—an *economic* treatment of the subject would be, no doubt, as touching the pockets of a large number of people, a more exciting theme. But admitting that the aggregate of imperial and local expenses must be provided for, throwing a tax off one description of property means, in the sphere of financial policy, placing it on another. The correlation of the parts would be disturbed; the wide and intricate field of taxation must then be entirely reviewed and re-adjusted, a task of no mean difficulty which may be fittingly omitted on this occasion.

The nearest approach, at present, to the annual value of real property in England and Wales, is expressed by some figures

supplied to me by the courtesy of Mr. Frederick Gripper, Accountant and Comptroller-General to the Board of Inland Revenue.

They show the gross sum to be upwards of 145,000,000*l.* for the financial year 1867-68, thus assessed:—

	£
Under Schedule A	116,341,387
Sum formerly charged under A, but since 1865, } transferred to Schedule D as profits	29,057,991
Total	<u>145,399,378*</u>

The assessment upon which the Crown actually gathered the tax was upwards of 9,000,000*l.* short of this gross sum; the statement of the amounts “charged” standing, for the same year, thus:—

	£
Under Schedule A	107,092,692
Sum formerly charged under A, but since 1865, } transferred to D as profits	29,041,932
Total	<u>136,134,624</u>

A difference between gross and net value of 9,000,000*l.* and more, arising upon those properties which are still retained in Schedule A.

What originally stood in Schedule A before any transfer was effected can be shown in detail for the last year of the old series, thus:—

Gross Annual Value of Property in England and Wales, Assessed under Schedule A of Income Tax Acts, Year ended 5th April, 1865.

	£
1. Lands, including tithe rent charge	46,403,000
2. Messuages.....	59,286,000
3. Tithes (not commuted)	58,000
4. Manors	189,000
5. Fines.....	166,000
6. Quarries	D 526,000
7. Mines	D 4,277,000
8. Iron works	D 1,248,000
9. Fisheries	D 31,000
10. Canals	D 786,000
11. Railways	D 13,882,000
12. Gasworks	D 1,618,000
13. Other property†	2,486,000
14. General profits‡	387,000
Total	<u>131,343,000</u>

* The details of this sum will be found in the Appendix, Table III.

† Salt springs or works, alum mines or works, docks, drains and levels; rights of markets and fairs, tolls, bridges, and ferries.

‡ All other profits arising from lands, tenements, and hereditaments or heritages not in the actual possession of the party to be charged, and not before enumerated.

The principal items now placed under Schedule D have that letter marked against the sum in the list above; probably considerable transfers have also been made from “other property” and “general profits;” but this is certain, quarries, mines, iron works, canals, fisheries, railways, and gas works heretofore under Schedule A are now accounted for under Schedule D.

In the British fiscal system real property suffers an exceptional liability to taxation. It bears fully *three-fourths* of our heavy and fast-increasing local rates, and then in a variety of ways it is made to supplement the imperial budgets. Here I may be permitted to remark that, in this country, we are too much in the habit of discussing our imperial and local systems of rates and taxes as things apart, yet their conjoint bearing on the interests of the holders of real property is obvious and practical. This opinion I had the honour of indicating to the Section, in a brief paper, when the British Association last met at Cambridge.*

The amount of local taxation incident upon real property is now known with great fulness; much is also known of the imperial burden, but for the reasons hereafter stated, approximate completeness is alone attainable in this section of our taxes. As the heaviest in amount the local taxes are first shown by the subjoined list:—

Local Taxation in England and Wales falling on Real Property in 1867-68, according to Mr. Ward Hunt's Return, Nos. 497 and 497—I, Sess. 1868.

	£
1. Amount levied under the name of poor rate.....	11,061,000
2. County, hundred, borough police, <i>not</i> paid out of } poor rate	307,000
3. Highway rate, <i>not</i> paid out of poor rate	917,000
4. Church rates	217,000
5. Lighting and watching rate	77,000
6. Improvement commission rates	445,000
7. General district rates, levied under the provision } of Public Health and Local Government Acts }	1,797,000
8. Rates under courts of Commissioners of Sewers, } including drainage and embankment rates	709,071
9. Rates of other kinds, and inclusive of 981,000 <i>l.</i> } levied in the metropolitan district as general } and lighting rates	1,203,000
Total	<u>16,733,000</u>

. Taken in round numbers and corrected by the most recent returns in possession of the Poor Law Board.

It may be well to remember that nearly half of this heavy sum is entailed upon the ratepayers by the absolute right to relief which the legislation of England has given to the poor. The expenditure

* See the “Transactions of the British Association for 1862,” p. 162.

last year for “relief to the poor” was 7,498,000*l.*; but law charges to the amount of 29,000*l.*; the cost of making valuations, 50,000*l.*; and “money expended for all other purposes,” 532,000*l.*, a large portion of which latter sum is solely contingent on pauperism, are all items that are excluded from what, in official language, is termed “relief;” though it is patent, that if pauperism ceased out of the land, most of these expenses would be determined. Add a due proportion of the excluded items and we may fairly say that, in round numbers English pauperism last year cost little short of 8,000,000*l.* sterling.

The imperial taxes that are incident upon realty certainly exceed 6,000,000*l.*, they probably approach to 7,000,000*l.* So far as their respective amounts can be discovered they are exhibited in the following statement:—

Imperial Taxation in England and Wales falling on Real Property in 1867-68, or thereabouts, according to Returns in possession of the Commissioners of Inland Revenue.

	£
1. Property tax, 1867	2,354,000
2. Land tax, 1868	1,058,000
3. House duty, 1868	1,003,000
4. Succession duty, average of 1867-68-69	562,000
5. Stamps on deeds and other instruments, not other- wise specified, 1868 (a)	1,405,000?
6. Fire insurance?	
7. Stamp duty on wills and letters of administration?	
8. Probate Court fees?	
Approximate total	6,382,000

(a) Stamps on sales, conveyances, leases, mortgages, &c., will be included in this sum, but what portion is not incident on real estate it is impossible to discover. The stamp duties on wills and letters of administration, some of which will be paid on leaseholds for years, and therefore indirectly from real property, is excluded from the above, and that exclusion may possibly balance the excess under the head of stamps on deeds. The duty on wills, &c., in England and Wales in 1867-68, was 1,493,000*l.* Probate Court fee stamps, which in 1868 amounted to 124,000*l.*, are also excluded.

The succession duty experiences considerable variations; according to particulars furnished by Mr. Gripper, the sums collected in England and Wales for the financial years 1867, 1868, and 1869 were respectively 507,081*l.*, 608,297*l.*, and 571,831*l.* For the purposes of this paper the average of the three years has been taken. Fire insurance duty has ceased; it is noted above as a reminder; very recently it was a tax that largely bore on certain descriptions of real property. After trial it is found impossible to analyse the stamp duties so as to exhibit that portion of the impost with which alone this paper is concerned.

Allowing for possible defects in the imperial tax table, the aggregate burden is this :—

	£
Taken by local taxation.....	16,733,000
„ imperial taxation	6,382,000
	<hr/>
Grand total.....	23,115,000
	<hr/>

Upon the gross value assessed under Schedule A—145,399,000*l.* This is equivalent to 3*s.* 2¼*d.* in the pound; on the net value—the amount “charged”—136,135,000*l.*, it equals 3*s.* 4¾*d.* in the pound. Here, however, it should be remembered, that the standards of comparison are themselves averages of a comprehensive sort; it is not every pound of gross or of “charged” value that is taxable. For example; on many estates the land tax is redeemed;* the inhabited house tax is not paid by more than *one-sixth* of all the householders of the kingdom; though measured on *value* alone, more than half the house-rental pays. The assessment of houses, &c. (other than farm houses), to the property tax in 1864-65 was, as already stated, 59,286,000*l.*; but for the purposes of the house tax, the levy was made upon 30,405,000*l.* Again, many small proprietors, being outside the statutable limit of the income tax, altogether escape it. In a word, as a taxable *corpus*, the valuations here cited must not be invested with an homogeneity they do not possess.

Though the Crown valuations under Schedule A be a much truer exponent of the country’s wealth in real property than any assessment yet made for the purpose of local ratings, it is, nevertheless, advisable to give, in a theme of this kind, some attention to the latter.

There is no information in existence as to the “rateable value” of England and Wales previous to the year 1840-41. This “rateable,” or, as it is sometimes termed, “annual value,” when discovered from returns obtained by the Poor Law Commissioners from the overseers of that time, was found to be 62,540,000*l.* The parish officers’ valuations were notoriously defective. The annual value of real property was ascertained by the Commissioners of the Income and Property Tax Acts to be 85,803,000*l.* in the subsequent year 1841-42. The whole excess of 23,000,000*l.* or so, must not, however, be ascribed to under valuation in the poor rate assessment. Some few things are in Schedule A, that are exempt from poor’s rate. The Parochial Assessment Act of 1837 does not appear to have mended matters much.† The increase of assessable property, and latterly, the application of sounder principles, intro-

* The annual tax redeemed up to 1856 was 770,000*l.*—*Statistical Journal*, vol. xx.

† See *Statistical Journal*, vol. xxiii, p. 292 *et seq.*

duced by the assessment committees in the practice of valuation—though yet very short of attainable completeness—make themselves visible in the next statement:—

Parochial Years.	Poor Rate Valuations.		
	Gross Estimated Rental.	Net Annual or Rateable Value.	Clear Interval between the Successive Returns.
	£	£	
1840-41	Not known	62,540,030	—
'46-47	„	67,320,587	6 years
'49-50	„	67,700,153	2 „
'55-56	86,077,676	71,840,271	5 „
'65-66	110,079,308	93,638,403	9 „
'67-68	118,334,081	100,612,734	1 year

A Parliamentary Return of some interest to the discussion of the incidence of taxation was in 1853, obtained upon the motion of Mr. Moffatt. The growth of the last fifteen or sixteen years has materially changed the relative proportion of some of the data selected from the paper and placed hereunder. Historically they have value now; hereafter, when we wish to ascertain whither political and economic forces are in this matter of taxation carrying us, their worth may be greater. The amounts payable in England and Wales out of each sort of rateable property was, in the language of the return, “ascertained by the rule of proportion applicable to “the poor’s rate.”

Different Descriptions of Property upon which the Rates were Incident.	Poor's Rate (including County, Borough, and Police Rates.)	Highway Rate.	Land Tax.	Proportion Paid by each Description of Property.	
				Amount.	Per Cent.
	£	£	£	£	
1. Land, including farm houses	2,707,627	607,546	533,112	3,848,285	41·2
2. Tithe rent charge	295,056	59,123	60,563	414,742	4·4
	3,002,683	666,669	593,675	4,263,027	45·6
3. Houses, including warehouses, facto- ries, &c.	3,124,526	889,574	478,816	4,492,916	48·1
4. Coal mines	61,191	14,082	5,981	81,254	0·9
5. Saleable underwoods....	28,524	6,236	5,581	40,341	0·4
6. Canals	28,471	7,596	3,756	39,823	0·4
7. Railways	204,871	52,537	30,171	287,579	3·1
8. All other descrip- tions of property }	102,032	25,881	12,937	140,850	1·5
Totals	6,552,298	1,662,575	1,130,917	9,345,790	100·0

Note.—The poor rate and highway rate levies are for the year 1851-52; the land tax for the previous year.

Here it is seen that sixteen years ago landed property, including the tithe rent charge, bore 45·6 per cent. of the aggregate amount of the rates and tax mentioned above; and the residual property 54·4 per cent. There is not, I believe, any subsequent return to show what changes may have taken place in these ratios when measured on the basis of the poor rate valuations; though, from the comparatively slow growth of one and the rapid growth of the other portion of assessable property, the differences must be considerable.

In the absence of a means of comparison similar in each particular with the table of 1851-52, we may, bearing in mind the necessary qualification, take the property tax assessment for 1864-65 as a guide—especially as the mere ratios are much less open to doubt, from the diversity of practice between Crown valuers and local valuers, than the absolute amounts.

Amount and Ratio of Gross Assessment in 1864-65, of Lands and of other Real Property under Schedule A, in England and Wales.

	£	Per Cent.
Of lands, including tithe rent charge	46,403,437	35·3
„ all other descriptions of real property } assessed in this schedule	84,938,062	64·7
Total	131,341,499	100·0

As against 1851-52, we may say that 10·3 per cent. has passed from the land and gone upon other assessable property. Land would appear now liable to bear rather more than *one-third* of any burden laid upon real property generally; and real property, other than land, rather less than *two-thirds*.

II.—*The Growth of the Property under Pressure.*

It has thus been shown, I may submit, that the imposts upon real property are in appearance exceptionally severe, taxed as it is both by the imperial and the local assessor. Have these burdens in any wise injured or retarded the growth of this species of wealth is the next question. During the past fifty years England has increased largely in numbers, and more largely in material prosperity. Under such conditions, it is inconceivable of any community, that a great impetus should not have been given to the development of what English lawyers mean by the term “realty,” or real estate. Authentic records afford the means of instituting a comparison between the years 1815 and 1868; or, roughly speaking, after the lapse of half a century. In the first named year the population of England and Wales was 11,004,000; in 1865 it was

21,500,000 persons; the increase being 96·2 per cent. In 1814-15, the real property assessed under Schedule A was 53,495,000*l.*, and in 1867-68 it was 145,399,000*l.*, or 171·8 per cent., and thus surpassing the rate of development in the population by 75·6 per cent.

This increase of real property is the more remarkable when the circumstances of what was formerly its most eminent constituent—land—are considered. This natural agent, in a country like England of the present century, is within very narrow limits restricted in quantity. Houses, mills, factories, railroads, &c., may and do increase indefinitely—arable land cannot. It is impossible to say what was the area under cultivation in 1815; and it is, I believe, a matter of conjecture which way the balance would incline if the loss by the expansion of our towns and by the introduction of railways was measured against the acquisitions by enclosures, which, reckoning only from 1845 to 1867, amounted to 506,502 acres, a surface much larger than the area now under cultivation in Dorset or in Cornwall. The estimated quantity of land occupied by a lineal mile of railway, according to a Parliamentary Paper of last Session, was 12·97 acres; the total extent 133,430 acres, or rather more than *one-fourth* of the quantity brought under culture by the Enclosure Commissioners in twenty-two years.

The Government has published no return of the gross valuation in each county, under Schedule A, for a period later than the financial year 1864-65; but, since a comparison of the value of land and of the other descriptions of real property for that year, in the different parts of the kingdom, with the official account in 1814-15, may be of some interest to the inquirer, the county details have been worked out and placed in the Appendix (Tables I and II).

Taken divisionally, the results are these, for the aggregate of real property other than lands:—

Divisions.	Annual Value of Real Property other than Lands.			Increase per Cent.
	1814-15.	1864-65.	Increase in 1864-65.	
I. The Metropolis and the extra metropolitan parts of Middlesex, Surrey, and Kent	£ 6,914,492	£ 31,336,856	£ 24,422,364	353·2
II. South-Eastern, less the extra metropolitan parts of Surrey and Kent	921,408	3,215,947	2,294,539	249·1
III. South Midland, less the extra metropolitan part of Middlesex	664,948	2,475,068	1,810,120	272·2

Divisions— <i>Contd.</i>	Annual Value of Real Property other than Lands.*			Increase per Cent.
	1814-15.	1864-65.	Increase in 1864-65.	
	£	£	£	
IV. Eastern	1,032,175	2,453,107	1,420,932	137·6
V. South-Western	1,782,524	4,695,384	2,912,860	163·4
VI. West Midland	1,429,248	7,852,049	6,422,801	449·5
VII. North Midland	473,185	4,248,121	3,774,936	798·1
VIII. North-Western	1,856,841	13,138,535	11,281,694	607·6
IX. York	996,986	7,924,120	6,927,134	694·8
X. Northern	712,777	4,013,925	3,301,148	462·9
XI. Welsh	450,791	3,584,534	3,133,743	694·9
England and Wales	17,235,375	84,937,646	67,702,271	392·8

* With "lands," wherever mentioned in this paper, tithes in the earlier years, and tithe rent charge in the later ones, are always included.

Under the house tax the farmer's dwelling is separately assessed, but for property tax purposes it is treated as an integral part of the land value.

Divisions.	Annual Value of Lands (inclusive of Tithes).			Increase per Cent.
	1814-15.	1864-65.	Increase in 1864-65.	
	£	£	£	
I. The Metropolis and the extra metropolitan parts of Middlesex, Surrey, and Kent	2,018,000	2,582,315	564,315	27·9
II. South - Eastern, less the extra metropolitan parts of Surrey and Kent	1,956,000	2,697,641	741,641	37·9
III. South Midland, less the extra metropolitan parts of Middlesex	3,716,000	4,935,099	1,219,099	32·8
IV. Eastern	3,209,000	4,908,096	1,699,096	52·9
V. South-Western	5,294,000	6,313,853	1,019,853	19·2
VI. West Midland	4,893,000	6,189,576	1,296,576	26·4
VII. North Midland	4,339,000	5,755,138	1,416,138	32·6
VIII. North-Western	2,397,000	2,826,389	429,389	17·9
IX. York	3,764,000	4,431,864	667,864	17·7
X. Northern	2,498,000	2,628,592	130,592	5·2
XI. Welsh	2,176,000	3,135,290	959,290	44·1
England and Wales	36,260,000	46,403,853	10,143,853	27·9

In these comparisons no adjustment for the depreciation of the currency in the earlier part of the century has been attempted. Professor Jevons has given a table in the *Statistical Journal*,* showing that, in 1814, gold was above the standard price of 3*l.* 17*s.* 10½*d.* by 34 per cent., and in the next year 20 per cent., at the latter ratio *one-fifth* must be deducted from all values in 1814-15.

From the absence of any authentic record of the land under cultivation in 1814-15, the means of computing the farm rental per acre are wanting. We are in a better position now; the rent for the whole kingdom, as well as for individual counties, can be worked out with, I believe, a useful approach to accuracy. The rent for all England and Wales was, in 1866, 1*l.* 17*s.* 9*d.* per acre. The statistics for this, as well as for the counties of the south-western division, are displayed below.

	Total Area in Acres.	Acreage under all kinds of Crops, Bare Fallow, and Grass in 1866.	Annual Rental, Schedule B, in 1864-65.	Rent per Acre.
			£	£ s. d.
All England and Wales	37,324,883	24,546,607	46,403,853	1 17 9
<i>South-Western Counties—</i>				
Wilts	865,092	636,786	1,161,656	1 16 6
Dorset	632,025	398,599	744,047	1 18 10
Devon	1,657,180	919,336	1,780,976	1 18 9
Cornwall	873,600	436,071	744,652	1 15 6
Somerset †	1,047,220	735,604	1,852,522	2 10 4

Note.—The agricultural statistics do not include the area of hill pastures; holdings under five acres are also excluded. In 1861, according to the census, there were 7,656 holdings in England and Wales under five acres each; their aggregate area was, however, only 19,140.

These figures have, perhaps, no very immediate bearing on the subject of the paper; but it seemed of possible utility to record them here for future guidance.†

While land and other kinds of real property have made, in the past half century, the highly satisfactory progress already men-

* Vol. xxviii, 1865.

† The rent per acre for land, *i.e.*, for 25,542,427 acres under cultivation, in all England and Wales, computed on the Returns of 1867-68, is 1*l.* 17*s.* 4*d.*

tioned, it is certain that trades, manufactures, and professions have enormously distanced agricultural industry in the race for wealth.

The assessment "for all profits or gains arising from any profession, trade, employment, or vocation," under Schedule D, is notoriously, and perhaps irremediably defective. In their last Report, the Commissioners of Inland Revenue estimate, from circumstances within their knowledge, that the return of income under this schedule is 57,250,000*l.* short of the true amount; no exaggeration can, therefore, be charged against the figures which represent profits and gains in the annexed table.

England and Wales under	Annual Value Assessed in	
	1814-15.	1864-65.
	£	£
<i>Schedule B—</i> Farmers' profits*	34,028,655	46,403,853
<i>Schedule D—</i> Profits of trades and professions	34,287,685	106,898,319

* Farmers' profits were estimated as equal to three-fourths of their rental in 1814-15, and one-half rental under the Act of 1842. The full rental of both years is given above.

The land rental in respect of which the farmer's profits are assessed has, during the fifty years ended with 1865, increased by 12,375,000*l.*, or 36 per cent.; the profits of trades and professions have, in the same interval, augmented by 72,611,000*l.* or 212 per cent., irrespective of the correction due for depreciated currency in 1814-15. Two factors enter into the increased assessments returned under Schedules A and B since 1864; real advance in quantity and in market value; and, an apparent advance by better assessment.†

There is, I fear, no possibility of assigning the true value to each factor. The Union Assessment Committees' valuation of 408 unions, embracing about half the rateable property of the kingdom, in 1863 amounted to 43,298,000*l.*; in the following year, when it may

† Alluding, in 1864, to a new valuation of property then in progress, under the orders of the Inland Revenue Office, the commissioners mention that in many districts the amount of duty was greater at 6*d.* than formerly at 7*d.* They state that "so far as Schedules A and B are concerned, this result is attributable "in no small degree to the care and judgment with which the assessments were "made upon this occasion by our surveyors, acting under special instructions from "this office. We have also been much assisted by the valuations under the Union "Assessment Act, especially in the case of land in the occupation of the owner, "where the former unsatisfactory parochial rating to the relief of the poor was the "guide upon which our officers chiefly relied."—"Ninth Report of Commissioners, "1865."

be supposed these bodies had obtained greater knowledge of their work, the assessment of the same unions was raised 5,384,000*l.*, or 12·4 per cent.

III.—*Conclusion.*

Though in the preceding pages the taxes incident upon real property have been termed a burden, this language requires some qualification when we examine the objects to which a large portion of our local rates are devoted. The charges entailed on the rate-payers by crime and pauperism might be dispensed with, to the great advantage of the property now defraying the cost. Though English poor rates largely supplement wages, and consumers thereby gain some temporary, but in its consequences more than doubtful, benefit. Expenditure upon the maintenance and repair of roads and bridges, upon the drainage and embankment of marsh lands, upon the sewerage, paving and lighting of towns, and upon many other services performed by improvement commissioners, as well as the sanitary measures undertaken by boards of health, are operations signally beneficial to rateable property.

So far, therefore, as the property is judiciously assessed, and the proceeds honestly and intelligently administered for these purposes, the local rate is a good investment, for which no enlightened owner will manifest an ignorant impatience of taxation. The imperial taxes and the other portion of the local rates stand in a very different category.

APPENDIX.

I.—*Comparative Statement of the Annual Value of Real Property, other than Lands, Assessed under Schedule A of the Property Tax Returns in 1814-15 and in 1864-65 in England and Wales.*

Divisions and Union-Counties.	Real Property, <i>minus</i> Lands. Annual Value in			Increase per Cent. in 50 Years.
	1814-15.	1864-65.	Increase.	Real Property, <i>minus</i> Lands.
I. THE METROPOLIS AND METROPOLITAN COUNTIES.				
	£	£	£	
1.* Middlesex	5,125,250	22,562,607	17,437,357	340·2
2.* Surrey	1,114,217	6,127,902	5,013,685	449·9
3.* Kent	675,025	2,646,347	1,971,322	292·2
Totals	6,914,492	31,336,856	24,422,364	353·2
II. SOUTH-EASTERN.				
2.* Surrey (see Division I)...	—	—	—	—
3.* Kent (")...	—	—	—	—
4. Sussex	242,215	1,381,918	1,139,703	470·9
5. Southampton.....	489,563	1,376,550	886,987	181·2
6. Berks	189,630	457,479	267,849	240·8
Totals	921,408	3,215,947	2,294,539	249·1
III. SOUTH MIDLAND.				
1.* Middlesex (see Divn. I)	—	—	—	—
7. Hertford	163,705	525,536	361,831	220·7
8. Buckingham	84,478	332,361	247,883	295·2
9. Oxford	168,082	445,331	277,249	164·9
10. Northampton.....	53,782	435,990	382,208	707·4
11. Huntingdon	32,984	106,066	73,082	221·2
12. Bedford	31,167	256,308	225,141	725·8
13. Cambridge.....	130,750	373,476	242,726	185·5
Totals	664,948	2,475,068	1,810,120	272·2
IV. EASTERN.				
14. Essex	409,176	968,563	559,387	136·7
15. Suffolk	275,115	653,797	378,682	137·8
16. Norfolk	347,884	830,747	482,863	138·8
Totals	1,032,175	2,453,107	1,420,932	137·6
V. SOUTH-WESTERN.				
17. Wilts	187,338	466,394	279,056	149·2
18. Dorset	127,005	365,059	238,054	187·4
19. Devon.....	486,978	1,460,731	973,753	200·0
20. Cornwall	259,061	816,138	557,077	215·1
21. Somerset	722,142	1,587,062	864,920	119·8
Totals	1,782,524	4,695,384	2,912,860	163·4

Note.—No attempt has been made in these tables to adjust the figures of 1814-15 according to the depreciation of the currency at that time. See *ante*, p. 317.

APPENDIX.

II.—*Comparative Statement of the Annual Value of Lands Only Assessed under Schedule A of the Property Tax Returns in 1814-15 and in 1864-65 for England and Wales.*

Divisions and Union-Counties.	Lands Only. Annual Value in			Increase per Cent. in 50 Years.
	1814-15.	1864-65.	Increase.	Lands Only.
I. THE METROPOLIS AND METROPOLITAN COUNTIES.	£	£	£	
1.* Middlesex	541,000	388,574	152,426 ^a	28·2 ^a
2.* Surrey	462,000	560,486	98,486	21·2
3.* Kent	1,015,000	1,633,255	618,255	60·9
Totals	2,018,000	2,582,315	564,315	27·9
II. SOUTH-EASTERN.				
2.* Surrey (see Division I)...	—	—	—	—
3.* Kent (,)...	—	—	—	—
4. Sussex	678,000	1,002,277	324,277	47·8
5. Southampton	747,000	1,028,120	281,120	37·6
6. Berks	531,000	667,244	136,244	25·6
Totals	1,956,000	2,697,641	741,641	37·9
III. SOUTH MIDLAND.				
1.* Middlesex (see Divn. I)	—	—	—	—
7. Hertford	420,000	596,131	176,131	41·9
8. Buckingham	580,000	720,200	140,200	24·1
9. Oxford	623,000	719,788	96,788	15·6
10. Northampton	894,000	1,123,304	229,304	25·6
11. Huntingdon	293,000	354,537	61,537	21·2
12. Bedford	334,000	442,141	108,141	32·3
13. Cambridge	572,000	978,998	406,998	71·2
Totals	3,716,000	4,935,099	1,219,099	32·8
IV. EASTERN.				
14. Essex	1,172,000	1,597,135	425,135	36·3
15. Suffolk	873,000	1,371,335	498,335	57·1
16. Norfolk	1,164,000	1,939,626	775,626	66·7
Totals	3,209,000	4,908,096	1,699,096	52·9
V. SOUTH-WESTERN.				
17. Wilts	1,019,000	1,161,656	142,656	14·0
18. Dorset	597,000	744,047	147,047	24·6
19. Devon	1,438,000	1,780,976	342,976	23·7
20. Cornwall	665,000	774,652	109,652	16·5
21. Somerset	1,575,000	1,852,522	277,522	17·6
Totals	5,294,000	6,313,853	1,019,853	19·2

^a Decrease.

I.—*Comparative Statement of the Annual Value of Real Property, other than Lands—Contd.*

Divisions and Union-Counties.	Real Property, <i>minus</i> Lands. Annual Value in			Increase per Cent. in 50 Years.
	1814-15.	1864-65.	Increase.	Real Property, <i>minus</i> Lands.
VI. WEST MIDLAND.				
	£	£	£	
22. Gloucester	293,687	1,269,332	975,645	331·9
23. Hereford	76,172	212,486	136,314	178·9
24. Salop	214,975	548,122	333,147	154·9
25. Stafford	286,475	2,810,004	2,523,529	882·5
26. Worcester	174,059	902,449	728,390	418·4
27. Warwick	383,880	2,109,656	1,725,776	449·5
Totals	1,429,248	7,852,049	6,422,801	449·5
VII. NORTH MIDLAND.				
28. Leicester	99,330	549,937	450,607	455·6
29. Rutland	8,214	29,670	21,456	262·5
30. Lincoln	121,755	687,508	565,753	463·9
31. Nottingham.....	107,867	747,657	639,790	592·6
32. Derby	136,019	2,233,349	2,097,330	1541·9
Totals	473,185	4,248,121	3,774,936	798·1
VIII. NORTH-WESTERN.				
33. Chester.....	263,984	1,579,307	1,315,323	498·1
34. Lancaster.....	1,592,857	11,659,228	9,966,371	625·6
Totals	1,856,841	13,138,535	11,281,694	607·6
IX. YORK.				
35. West Riding	996,986	7,924,120	6,927,134	694·8
36. East „				
37. North „				
X. NORTHERN.				
38. Durham	230,217	2,135,180	1,904,963	828·3
39. Northumberland.....	312,794	1,075,018	762,224	243·4
40. Cumberland.....	145,439	692,209	546,770	377·2
41. Westmorland	24,327	111,518	87,191	362·5
Totals	712,777	4,013,925	3,301,148	462·9
XI. WELSH.				
42. Monmouth	59,074	608,894	549,820	932·2
43. South Wales	225,248	2,029,184	1,803,936	801·8
44. North „	166,469	946,456	779,987	469·9
Totals	450,791	3,584,534	3,133,743	694·9
Totals of England and Wales	17,235,375	84,937,646	67,702,271	392·8

II.—*Comparative Statement of the Annual Value of Lands Only—Contd.*

Divisions and Union-Counties.	Lands Only. Annual Value in			Increase per Cent. in 50 Years.
	1814-15.	1864-65.	Increase.	Lands Only.
VI. WEST MIDLAND.				
	£	£	£	
22. Gloucester	1,026,000	1,290,056	264,056	25·7
23. Hereford	554,000	750,812	196,812	35·6
24. Salop	870,000	1,142,361	272,361	31·3
25. Stafford	912,000	1,165,802	253,802	27·8
26. Worcester	645,000	854,394	209,394	32·4
27. Warwick	886,000	986,151	100,151	11·3
Totals	4,893,000	6,189,576	1,296,576	26·4
VII. NORTH MIDLAND.				
28. Leicester	853,000	998,650	145,650	17·1
29. Rutland	130,000	158,375	28,375	21·6
30. Lincoln.....	1,970,000	2,820,542	850,542	43·2
31. Nottingham	639,000	874,411	235,411	36·7
32. Derby	747,000	903,160	156,160	20·9
Totals	4,339,000	5,755,138	1,416,138	32·6
VIII. NORTH-WESTERN.				
33. Chester.....	851,000	1,112,561	261,561	30·7
34. Lancaster.....	1,546,000	1,713,828	167,828	10·9
Totals	2,397,000	2,826,389	429,389	17·9
IX. YORK.				
35. West Riding	3,764,000	4,431,864	667,864	17·7
36. East „				
37. North „				
X. NORTHERN.				
38. Durham	575,000	631,632	56,632	9·9
39. Northumberland.....	1,056,000	977,244	78,756 ^a	7·5 ^a
40. Cumberland.....	592,000	716,476	124,476	20·9
41. Westmorland	275,000	303,240	28,240	10·2
Totals	2,498,000	2,628,592	130,592	5·2
XI. WELSH.				
42. Monmouth	244,000	334,379	90,379	36·9
43. South Wales	1,060,000	1,490,031	430,031	40·6
44. North „	872,000	1,310,880	438,880	50·3
Totals	2,176,000	3,135,290	959,290	44·1
Totals of England and Wales	36,260,000	46,403,853	10,143,853	27·9

^a Decrease.

III.—*Gross Annual Value of Property in England and Wales, Assessed under SCHEDULE A of the Income Tax Acts; also the Gross Assessments of Property and Profits under SCHEDULE D but formerly Charged under SCHEDULE A.*

Year ended 5th April, 1868.

	£	£
Lands (including tithe rent charge).....	47,711,252	
Messuages	68,012,873	
Tithes not commuted:	55,511	
Manors	163,172	
Fines	158,660	
Other profits from lands	239,919	
	<hr/>	116,341,387
Railways	D 15,980,150	
Quarries	D 559,672	
Mines	D 5,103,525	
Ironworks	D 1,459,809	
Fisheries	D 36,621	
Canals	D 718,605	
Gasworks	D 1,771,954	
Other property and profits*	3,427,655	
	<hr/>	29,057,991
Total		<hr/> 145,399,378 <hr/>

* "Other property and profits," includes 1,526,790*l.* dividends on foreign securities (not Government securities), and which are paid in the city of London only. This head of assessment (foreign securities) has never before appeared under Schedule A.

IV.—*The Real Property which in Absolute Amount shows the largest Augmentation of Assessment between 1867-68 and 1864-65, comes under the six following Heads—*

England and Wales.	1864-65.	1867-68.	Increase in Three Years.
	£	£	£
Lands	46,403,000	47,711,000	1,308,000
Messuages	59,286,000	68,013,000	8,727,000
Railways 	13,882,000	15,980,000	2,098,000
Mines	4,277,000	5,104,000	827,000
Gasworks	1,618,000	1,772,000	154,000
Ironworks	1,248,000	1,460,000	212,000

Note.—The aggregate increase of assessment under these heads was 13,326,000*l.* or 10·5 per cent.

MISCELLANEA.

CONTENTS:

	PAGE		PAGE
I.—On the Method of Teaching Physical Science in Schools	325	IV.—Emigration, 1868, and Previous Years	333
II.—Reduction in Weight of Gold Coin	329	V.—The English and the French Post Offices	335
III.—Railway Casualties in 1868	332		

I.—On the Method of Teaching Physical Science in Schools.

THIS very interesting and practical paper by the Rev. W. Tuckwell, M.A., late Fellow of New College, Head Master of the Taunton College School, was read before Section F of the British Association, at the recent meeting in Exeter :—

The theoretical claims of Physical Science to a fair place in the course of school work have been abundantly vindicated ; and are, I suppose, established. But the method and details of its teaching, the books and apparatus which it requires, and the amount of time which must be given to it, are points which can be decided only by experiment, and have not yet been decided at all. I cannot premise too distinctly that the aim of this paper is *practical*. Of the necessity for teaching physical science to their boys, many schoolmasters are convinced ; as regards the machinery by which it is to be taught, they mostly confess their ignorance and cry aloud for guidance. In my own school it has been taught systematically for the last five years, and I offer the fruit of this experience, very humbly, to all who are interested in education.

Leading Topics.

The subjects to be taught—the time to be spent on them—the books and apparatus necessary—and the mode of obtaining qualified teachers, are the points on which information seems to be required. I will take them in order.

Subjects to be Taught.

The *subjects* which naturally suggest themselves as essential are experimental mechanics, chemistry, and physiology. But it has been lately urged by high authority, familiar to the members of this Association, that between chemistry and physiology systematic botany should be interposed, both because of the charm and interest this science lends to daily life, and from its cultivating in a peculiar manner the habit of observation, and illustrating a class of natural objects which are touched indirectly or not at all by the other sciences named. Whether all these four subjects can be taught depends upon the period to which school education is protracted ; but at any rate let these, and none but these, employ the hours specially assigned to science in the weekly scheme of work. For less direct instruction in other branches of science abundant opportunity will remain. The geographical lectures, if properly treated, will include the composition of the earth's crust, with the classification and distribution of its inhabitants, both animal and vegetable, both extinct and recent. The laws of light and heat will be taught as prefatory to chemistry. Electricity attracts boys so readily that with a little help they will make great progress in it themselves. The possession of meteorological instruments, whose records are regularly taken and their computations worked by the boys, will almost insensibly teach them the principles of atmospheric phenomena, and will enable them to enliven their walks in a hilly country by barometric or hypsometric measurements ; while such books as *Airy's Popular Astronomy*, *Mauzy's Physical*

Geography of the Sea, and *Herschel's Meteorology*, may be given as special matter for annual scientific prizes. The mathematical master whose best boys are well advanced will not be satisfied till he has obtained a transit instrument and a mural circle. And the wise teacher, living in the country, will not disdain to encourage in all his pupils a love of natural history. He will know that it is not only ancillary to severer scientific study, but in itself a priceless and inexhaustible resource. By country walks, by well-chosen holiday tasks, by frequent exhibitions of the microscope, he will add to the intellectual stock of his boys while he builds up safeguards to their moral purity. Indeed, even without such encouragement, boys who are trained thoroughly in certain sciences will of their own accord seek to become familiar with other and collateral ones. Cases multiply in my own experience where pupils of a chemistry class have voluntarily taken up electricity, pupils of a geography class mineralogy, pupils of a physiological class microscopy. And I need hardly say that boys make nothing their own so entirely as that which they select themselves.

Time.

The time to be given to science should not be less than three hours a week. At this rate two years may be given to mechanics, two years to chemistry, one year to botany; while the rest, if any remain, will be free for physiology. We need not be afraid of beginning early. A boy of eleven years old, fresh from an intelligent home, where his love of observation has been fostered and his inquiries have been carefully answered, is far more fit to appreciate the study of natural laws than a much older boy, round whose intellect at an old-fashioned school the shades of the prison-house have steadily begun to close. Most schools are now divided into lower, middle, and upper. I would commence the study of mechanics with the junior class in the middle school.

Mechanics—Two Years.

For the first year the teaching may be *vivâ voce*, with easy problems and abundant experiment; care being taken that each week's teaching shall be reproduced on paper, and great attention being paid to careful drawing. In the second year the teaching will be more minute and more extended, and a good book will be mastered: the class is by this time fit to pass creditably the Oxford local examination for juniors, and has done with mechanics for the present.

Chemistry—Two Years.

The third and fourth years will be given to inorganic chemistry. Of these the third year will include only lectures in the class room; a text book being used, and experiments being shown by the master, but no laboratory work being done by the boys. The fourth year's teaching will be given entirely in the laboratory, each boy manipulating with his own instruments at his own table. At the end of this year the class will be qualified for the chemistry examination in the London University matriculation.

Botany—One Year.

The fifth year is due to botany. If a good manual is employed, if each pupil works for himself with knife and lens, if Henslow's *Schedules* or modifications of them are regularly filled up; above all, if plates are not made to do the duty of living plants, the class will at the year's end thoroughly understand the principles of botanical classification, will know the characteristics of at least the British orders, and will be able, with the help of Bentham or Babington, to make out almost any British flower. The boys who have completed this course will now be from 16 to 17 years old. Some of them will be leaving school: those who stay will give the rest of their time to physiology.

Physiology.

They will begin with human and pass to comparative physiology, using in the first Professor Huxley's little book; dependent for the second, of which no school

manual exists, upon the skill and method of their teacher. But whether at the earlier or the later age, they will pass into the world immeasurably superior to their contemporaries who know not science; with doors of knowledge opened which can never again be closed; with a fund of mental resource which can never be exhausted; with minds in which are cultivated, as nothing else can cultivate them, the priceless habits of observation, of reasoning on external phenomena, of classification, arrangement, method, judgment.

Apparatus and Books.

The subject of books and apparatus, involving as it does the question of expense, is of the highest practical importance. Apparatus need not cost much; but it may, and in some places it should, cost a great deal. While poor and struggling schools may begin cheaply and proceed gradually, institutions which can spend money freely on racket courts and gymnasiums, ought not to grudge it on museums and botanic gardens.

Mechanics.

In my own school, we have taught mechanics efficiently, that is to say, we have passed our classes for the last three years in the Oxford local examinations; with a good air-pump, a set of pulleys, models of the force-pump and the common pump, and with a diligent use during the second year of *Newth's Mechanical Philosophy*. But we lose no opportunities of making boys practically acquainted with machinery, from the crane or the watermill of our daily walks, to the steam-engine and the spinning jennies of the distant manufactory. He who has not examined machines at work, will never understand them clearly or describe them accurately.

Chemistry.

For teaching chemistry a laboratory is absolutely essential: no matter how rough a room, so that it be well ventilated, have gas and water laid on, and will hold from sixteen to twenty boys. The model which I exhibit, is on the scale of 2 inches to a foot, and represents a table 10 feet long and 3 feet wide; it has shelves and compartments for eight boys, with ample space for the master. A table of these dimensions can be made by a carpenter for 4*l.*; it can of course be indefinitely extended at the rate of about 8*s.* to every fresh compartment. The text-book may be Roscoe's or Williamson's, and it is absolutely necessary that a large black board should be readily accessible to the master. The general laboratory stock, including a stove, a still, and a pneumatic trough, with the necessary jars, tripods, retorts, and crucibles, will cost less than 12*l.* Each pair of pupils will possess between them a set of test tubes, a wash bottle, a spirit lamp, a waste bason beneath the table, and twenty-four bottles of test solutions; while each boy has his own blowpipe, tripod, pestle and mortar, and three beakers. These will cost every pupil from 7*s.* to 8*s.*; he will receive the value of his stock from his successor when he quits the class, replacing breakage at his own cost.

Botany.

The botanical text book is *Oliver's Elementary Botany*: but the teacher will find valuable assistance in *Le Maître's Leçons Élémentaires de Botanique*. An excellent modification of Professor Henslow's *Schedule* is printed by Mr. Babington for the use of his Cambridge pupils, and Lindley's *Descriptive Botany*, price 1*s.*, should be freely used. Every boy must have a small deal board, a lens, and a sharp knife. This microscope, including a lens, fixed or moveable, a black glass stage, two needles, and a forceps, is made by Mr. Highley, of Green Street, Leicester Square, for 6*s.* The flower trays, of which I show a specimen, should be kept constantly in use; their cost is 1*s.* 6*d.* per tray, and the glasses cost 6*s.* per gross. Fitch's *Diagrams*, designed for the Committee of Council on Education, at the price of 2*l.* 9*s.*, are a valuable help to lectures; and for schools which have large purses or liberal friends, Dr. Auzoux's models of plants and plant organs, ranging in price from 20 frs. to 100 frs., and ten times the size of life, form a luxurious

assistance to beginners, which only those who have worn out their eyesight over a composite floret or the glumes of a grass can appreciate.

Physiology.

The same admirable modeller, whose catalogue I hold in my hand, provides every organ necessary for the study of physiology, and his prices ought not to be beyond the reach of any prosperous school. In any case a skeleton will be necessary, costing about 5*l.*, and if the Committee of Council were to authorise the reproduction of such typical physiological cabinets, as from the skilful hands of Mr. C. Robertson, of the Oxford Museum, drew admirers in the Exhibition of 1862, they would find immediate purchasers in many of our schools. At present teachers want skill or leisure to make their own preparations, and they cannot buy them.

Meteorology and Astronomy.

A good set of meteorological instruments, including a standard barometer, costs from 15*l.* to 20*l.*; but these, with astronomical apparatus, are a costly luxury, and may be left out of the list of indispensable necessities.

Museums.

I cannot think that any school, professing to teach science systematically, will be long without a typical museum. As work proceeds, specimens of all kinds, some purchased for demonstration, others given by friends, or collected by the boys, must gather and increase, till the class room shelves and cupboards are choked, and a special room must be devoted to them. Here will be arranged in one place rocks and fossils, in another trays of minerals, in another zoological specimens, in a fourth physiological preparations. The driest corner will be given to the herbarium; a small scientific library of reference will add to the promise of the future. Everything not typical will be rigorously excluded; every case will be so carefully arranged and so plainly labelled as to tell the history of its contents to the eye of the least instructed observer. And it will be hard if a corner of the playground cannot be laid out as a botanic garden.

Botanic Garden.

In the crowded school premises at Taunton, which we are happily about to leave, I have found room for nearly four hundred plants; and at our new school we shall riot in ten acres of ground, with pond for water plants and sheltered rockery for ferns.

Teaching Power.

It remains only to examine the mode of obtaining teaching power; a point which presses heavily on many head masters who have themselves no knowledge of science. That all head masters should have such knowledge is a fact which, if science is to be taught at all, trustees and governing bodies must come to recognise before long; and meanwhile every school which teaches science thoroughly, is training skilled teachers for a not distant generation. Schools which can give their scientific master so high a salary as to command a London B. Science, or a first-class man from the older universities, will find no more difficulty than the choice of all masters involves: it is sometimes possible by combining mathematics with physical science to tempt a superior man by a sufficient income; and at the worst the ordinary Pass B.A. of the London University should make a fairly efficient teacher. But one point has struck me forcibly in my own experience: namely, the unexpected value of general culture in teaching special subjects. The man who knows science admirably but knows nothing else prepares boys well for an examination, but his teaching does not *stick*. The man of wider culture and refinement brings fewer pupils up to a given mark within a given time: but that which he has taught remains with them: they never forget or fall back. I am not sure that I understand the phenomenon, but I have noted it repeatedly.

Results of Teaching Science.

I cannot close this paper without one word as to the educational results which my own experience has revealed to me. The system brings about this consequence first of all, that it leaves no dunces in the school. In a purely classical school, for every brilliant scholar there are probably two who make indifferent progress, and one who makes no progress at all: and thus a certain proportion of the school, habitually disheartened, loses the greatest boon which a school can give, namely, the habit and the ambition of intellectual improvement. By giving importance to physical and abstract science, the balance is at once reduced: every boy progresses in his own subject, some progress in all: no one thinks learning hateful. Secondly, the teaching of science makes school work *pleasant*. The boys' evident enjoyment of these lessons rouse the emulation of other masters. It is discovered that the teaching of languages may become as interesting as the teaching of science; the maxim of Socrates is realised, that no real instruction can be bestowed on pupils, "*παρὰ τοῦ μὴ ἀρέσκοντος*," "by a teacher who does not give them pleasure!" Lastly, the effect on the boy's own development is beyond all dispute. It kindles some minds which nothing else could reach at all. It awakes in all minds faculties which would otherwise have continued dormant. It changes, to an extent which we cannot overestimate, the whole face and character of school life, both to the learners and the teachers. It establishes, as matter of experience, what has long been urged in theory, that the widest culture is the noblest culture; that universality and thoroughness may go together; that the system which confines itself to a single branch of human knowledge does not gain, but loses incomparably, by its exclusiveness; that observation, imagination, and reasoning, may all be trained alike; that the end and aim of the teacher's life must be to teach many things and teach them well.

II—Reduction in Weight of Gold Coin.

THE subjoined article upon the Chancellor of the Exchequer's suggestion, is reprinted from the *Times*:—

"The Chancellor of the Exchequer has, at the end of the Session, given the public a subject to think over between this time and the reassembling of Parliament next year. 'All I am anxious to do before we separate,' he said on Friday night, is to give to honourable members and the country at large a subject for consideration.' In other words, Mr. Lowe has, like a schoolmaster, favoured his young friends with a holyday task to get up in the vacation. We hope they will undertake it, and, we dare say, the indefatigable persons who spend their autumn in the Economic Section of the British Association, the pursuit of social science and kindred pleasures, will have something to say about the matter; but we fear the mass of politicians will return Mr. Lowe his problem just as they received it. He encourages us with the soothing declaration that it is very simple; but it does not look so. The embarrassing word 'value'—most absurd of economic terms—occurs much too often in his exposition, while 'currency,' 'seigniorage,' 'double standard,' 'balance of exchanges,' and other well known occasions of despair chase one another through the columns devoted to the report of his speech.

"The best way to make Mr. Lowe's desires intelligible, is to plunge at once *in medias res*. At present the brand-new sovereign is a piece of gold weighing 123·274 grains, and if merchants take uncoined bullion to the Mint they receive back exactly the same weight of gold in exchange, but transformed from uncoined metal into sovereigns. These are the two facts from which to start. The Mint makes no charge for coining, and the weight of the sovereign is 123·274 grains, or, as it may be expressed otherwise, the Mint receives gold from those who bring it, and gratuitously returns the same weight of metal to them in stamped pieces, each

weighing 123·274 grains. Mr. Lowe proposes that in future the sovereign shall weigh 122·274 grains, or, perhaps more accurately, 122·25 grains; but that those who wish to have bullion coined into sovereigns shall be compelled to bring, as heretofore, gold at the rate of 123·274 for each pound, the difference of a grain being retained by the Mint. Mr. Lowe thus desires to impose a mint-charge or seigniorage, to make it rather less than 1 per cent., and to levy it by reducing the weight of the sovereign, while maintaining the standard weight of the gold to be delivered at the Mint in exchange for sovereigns. What are the reasons for advocating such a change? In the first place, it is alleged that all other nations enforce a seigniorage in coining. This of itself would not greatly affect our judgment, as the mere fact that we are singular in pursuing a special course would not materially shake our confidence in its wisdom; nay, if it turns out on inquiry that we have defied the example of the rest of the world for two hundred years, as we have done in this matter of minting, we are apt to think we must be right. But, secondly, if the sovereign only weighed $122\frac{1}{4}$ grains, it would correspond almost exactly with the weight of 25 frs. in gold—that is to say, four sovereigns would be absolutely equal to five napoleons, and the Imperial Government is, moreover, prepared to issue at the Hôtel des Monnaies pieces of gold, new louis d'or, equivalent to 25 frs. The reduction in the weight of the sovereign would thus make it and this new French coin interchangeable; nay, the napoleon itself would be admissible in our currency as equal to 16s., and a great step in advance would have been made towards the establishment of an international coinage. We have not, however, yet stated the great argument Mr. Lowe relies upon as at least most influencing his own mind—that the change would produce an annual saving to the nation. We give away for nothing the labour of assaying, partitioning, and stamping the gold which the bullion merchants bring to the Mint. It will be readily seen that the cost of this labour might be exacted from those who wished to have gold coined without running the danger attendant on an excessive seigniorage. We doubt, however, whether 1 per cent. is not a charge dangerously exceeding the actual outlay, as it cannot—and, indeed, it is allowed that it does not—cost a pound to coin a hundred sovereigns; but it may be said that, although it costs the Mint less than this, it would probably cost a private coiner more. In effect, the charge recommended by Mr. Lowe might probably be safely demanded, and the Exchequer would be relieved of the cost of coinage. This is not all. As we coin for nothing, we coin much more bullion than the necessities of commerce require. for while a man wishing to export bullion gets it coined simply as a certificate of weight and purity, another proportion—and, considering the subject, a large proportion—of our coinage is, for other reasons, melted down again almost as soon as it is coined. The standard weight of the sovereign is 123·274 grains, but the sovereign remains a legal tender as long as it is 122·5 grains in weight, and in spite of all the delicate machinery at the Mint, it is impossible to secure an exact equality in the weight of sovereigns when issued. It has been authoritatively declared that ‘there is reason to believe that large masses of new British sovereigns are occasionally treated so as to separate out the heavy pieces, and these are disposed of as bullion; while the lighter pieces, which may still be all of legal weight, are preserved and put into circulation.’ Mr. Lowe told the House on Friday that this process of sifting and melting was formerly carried on next to the Mint, ‘so that the two establishments were side by side, one coining money the other melting it down;’ but the prejudices of insular legislation have driven the manufactory to Brussels. A last reason for imposing a seigniorage is, that ever since the outcry against light sovereigns—now more than a quarter of a century since—we have taken no pains to insure the full weight of our coin, and it has fallen terribly below the standard. Mr. Jevons, who read an elaborate paper on the subject before the Statistical Society last November, and to whom the Chancellor of the Exchequer on Friday acknowledged himself indebted for calling his attention to it, has shown that about 31 per cent. of the current coinage consists of light money, the proportion varying from 22 per cent. at Manchester, to 44 per cent. in the eastern and west midland counties. The cost of recoinage the currency as it now exists, due to the deficiency of weight of sovereigns to be withdrawn, is estimated at 300,000*l.*, irrespective of the expenses

of the Mint, which will amount to more than 40,000*l*. The seigniorage Mr. Lowe proposes would reduce the amount of money coined in future, pay the working expenses of the Mint, and provide for the replacement of light coin from time to time; and this last object Mr. Lowe would secure by demonetising coins more than eighteen years old, the age it is calculated a coin with proper wear will remain of good weight.

“It rarely happens that all the reasons are on one side, and there are arguments against the imposition of a seigniorage in the way suggested by the Chancellor of the Exchequer which induced the International Monetary Commission to reject the proposal. What is a pound? The answer has hitherto been—a piece of gold weighing 123·274 grains, and upon this footing contracts have been based. Mr. Lowe recommends that it shall weigh only 122·274 grains in future, and it is argued that the adoption of the proposal would diminish the obligations of debtors and detract from the lawful claims of creditors by 1 per cent. Mr. Lowe denies this conclusion. His reasoning is somewhat refined, and his conclusion, that a gain may be secured to the State without a loss to anybody is so paradoxical that the argument deserves the title of a financial puzzle much more than the simple devices which have been so named. The way in which we understand the Chancellor of the Exchequer, following Adam Smith, to put the case, is this—that, although a sovereign will weigh but 122·274 grains, no person can buy one except by giving 123·274 grains of gold to the Mint for it, and the cost of the production of the sovereign remains, therefore, unchanged, although its weight is diminished. Hence we may deduce, if we confine our attention to the United Kingdom, that the sovereign will maintain an undiminished value in exchange. But how can this reasoning be applied when we remember the existence of other nations? The sovereign is abroad 123·274 grains of gold of certified quality, and its value is measured by reference to the demand for pure bullion. The Chancellor of the Exchequer and Mr. Jevons suggest a reply. The change in the weight of the sovereign will make it a coin in France as much as in England, and, as has been pointed out, lays the basis of a universal currency, so that if the reasoning be admitted to be sound which declared that the sovereign would maintain its full value if the United Kingdom alone were to be regarded, it must be admitted to be universally sound, for by United Kingdom is simply meant the sphere of circulation of the sovereign as a coin. The result is anomalous, and we might, perhaps with advantage, leave it in this condition to excite the speculative faculties of the country; but it may nevertheless be as well to suggest a consideration which seems to have been omitted. The grain of gold which would be reserved by the Mint out of the 123·274 bought for a sovereign would not be lost, but would in due course be coined by the Mint itself for the remuneration of the Exchequer, so that the number of sovereigns poured upon the world would be increased reciprocally as the weight of each diminishes. The purchasing power of each sovereign would be diminished precisely as the number added to the circulation would be increased—that is, precisely as the weight of each would be diminished. This reasoning appears to turn the flank of Mr. Jevons and the Chancellor of the Exchequer, and, without following steps any one can trace for himself, it would lead to this result—that the future gain to the Exchequer would be felt by the loss of purchasing power of the product of the Australian and Californian digger, and in the process there would occur that benefit to the debtor and loss to the creditor which has been deprecated. We do not, however, press this as an invincible obstacle to the proposal; on the contrary, we hold it is right that the Australian digger should be called upon to pay for the labour hitherto gratuitously added to the commodity he produces, and the derangement of the relations of debtor and creditor may possibly, as Mr. Jevons suggests, be adjusted as easily as a derangement due to an increase of income tax; but it is a necessary addition to the complexity of the problem Mr. Lowe has sent forth for autumnal reflection, and we send it forth to fructify in the minds of those who care to understand it.”

III.—*Railway Casualties in 1868.*

FROM the *Pall Mall Gazette*:—

“The complete official tale of casualties to human life and limb on all the railways of the United Kingdom during the twelve months ended with December last is 212 killed and 600 injured. But among the killed 8 suicides are counted, for which the railways cannot be deemed responsible—unless, indeed, the 8 unfortunates were shareholders. Making this deduction we have 204 deaths. This, however is under the mark, but how much under, the return of the Board of Trade offers no means of estimating; it tells us only that the statement of ‘accidents to servants of companies or of contractors cannot be looked upon as complete, as many railway companies (not being required by law) do not report to the Board of Trade every accident which may have occurred to this class of persons.’ Nearly all the recorded injuries and about two-thirds of the recorded deaths fall under, with reference to the sufferers, two broad and opposite categories—(a) accidents from causes over which the sufferers had no control; and (b) accidents from causes originating in the misconduct or carelessness of the sufferers. The other deaths, about one-third of the whole, are classed without specific regard to these conditions.

“Taken synoptically, the results of all the reported casualties may be thus tabulated:—

Reported Accidents on the Railways of Great Britain and Ireland during the Year 1868.

	Number of Killed.	Number of Injured.	Corresponding Totals in 1867.	
			Killed.	Injured.
<i>a. Causes beyond the control of the sufferers—</i>				
Passengers	40	519	19	689
Servants of companies or of contractors ...	19	47	15	62
Total of unavoidable casualties as regards } sufferers	59	566	34	751
<i>b. Causes originating in the misconduct or want of caution of sufferers—</i>				
Passengers	22	6	17	8
Servants of companies or of contractors ...	64	18	90	28
Total of avoidable casualties as regards sufferers	86	24	107	36
Sufferers by level crossings.....	14	3	10	2
Trespassers	41	4	51	5
Suicides.....	8	—	6	—
Miscellaneous	4	3	1	1
Total not classed with reference to controllable } or uncontrollable causes	67	10	68	8
Grand total	212	600	209	795

Of the year's aggregate of casualties (deaths and injuries) three-fourths were unavoidable as far as the sufferers themselves were concerned. Only one-eighth (86 deaths and 24 injuries) is ascribed to what may be termed causes controllable by the sufferers. More trespassers, it will be seen, were killed than passengers classed under ‘causes beyond the control of the sufferers;’ indeed, fully 20 per

cent. of the deaths arose from trespassing on the permanent way. 'Trespasser run over and killed' constantly catches the eye as it runs down the list of accidents. Level crossings, which in the early days of railroads were not sanctioned by Parliament, are very fatal in their consequences, especially to children. Such records as the following are constantly recurring:—'A little girl struck by a train and killed at an occupation level crossing at Cefn station.' 'Child three years old run over and killed whilst playing on the line near Hendrefooyan.' 'A child run over at an occupation level crossing between Twickenham and Teddington stations.' This child was not killed on the spot—only had one leg cut off. 'Boy run over and killed at a foot level crossing near Twickenham.' 'A little girl run over and killed at a public carriage road level crossing near Brockenhurst station.'

"The next victim, we suppose, from the wording of the report, will be classed with the 'trespassers.' The accident occurred on the South Eastern line. 'Child run over and killed whilst trespassing (playing on the line) at a level crossing near Cuxton station.'

"The extracts just given relate to English or Welsh lines. No similar casualties to children are reported from Scotland, but from Ireland there is one—'a child six years old run over and killed at a private level crossing between Monaghan and Glasslough.' The price in human life, to save railway companies the cost of continuing the ordinary highways by means of bridges over their lines, was this year 14 men, women, and children slaughtered on the spot. Of the passengers who lost their lives last year by 'train accidents,' 31 perished by the horrible Abergele catastrophe. Notwithstanding a considerable variation as between 1867 and 1868 in the mortality of the three sections into which our synopsis is divided, it is curious, on leaving out the suicides, to find how close the totals approximate—203 deaths in the earlier and 204 deaths in the latter year.

"Naturally, the public is most concerned to ascertain the circumstances of train accidents—casualties to the trains when in actual transit. To passenger and to goods trains 101 separate accidents are returned for the year; 43 were collisions, causing 37 deaths of passengers and more or less injuring 382 others. Trains getting off the rails killed 2 and injured 27 passengers. What is the chance of death or of injury to passengers from *train accidents*? The mean annual number of passengers using the railroads of the United Kingdom during the three years ended with 1867 was 271,390,000; the mean annual deaths, $34\frac{1}{3}$, or one death to about every 8,000,000 passengers; the mean annual number of injured was 761, or one to every 356,000 passengers who started. Train accidents are not inclusive of those deaths which happen to passengers from too tardily entering or too hastily leaving a carriage in motion—causes fatal to no less than twelve persons during the year. This is the recorded number, but in reality it must be very much higher.

"Train accidents are summarised in the official paper under some twenty different heads, according to the circumstances under which each casualty happened; but no discrimination is made between ordinary and extraordinary trains—yet surely this is a distinction to be kept in view when railway chances are to be estimated. Some years ago, Dr. Lardner laid it down as a rule for the guidance of travellers that 'special trains, excursion trains, and all other exceptional trains on railways are to be avoided, being more unsafe than the ordinary and regular trains.' It is quite within the power and ought to be within the province of the Board of Trade to let the public know whether more recent facts weaken or strengthen the warning which Lardner gave fourteen or fifteen years since."

IV.—*Emigration, 1868, and Previous Years.*

From the *Canadian News* of the 5th August last:—

"The twenty-ninth general report of the Emigration Commissioners for the year ending 30th April, 1869, has just been issued, showing the progress of

emigration from 1815 to the end of 1868, the number and description of emigrants in 1868, and the ports from which and to which they sailed. The result is that while the *average emigration* during the fifty-four years from 1815 to 1868 inclusive has been 120,345 a-year, and during the ten years ending with 1868 170,150 a-year, the emigration in 1868 was 196,325. The emigration in 1867 having been 195,953, the increase during the year was only 372.

“ But the following table will show that since 1863 the real emigration from the United Kingdom has been rapidly falling off, and that its apparent magnitude has been kept up by the great increase in the number of foreigners who now emigrate through the United Kingdom. The numbers have been :—

Emigration, 1863-68.

Year.	English.	Scotch.	Irish.	Foreigners.	Not Distinguished.	Total.
1863.....	61,243	15,230	116,391	7,833	23,061	223,758
'64.....	56,618	15,035	115,428	16,942	4,877	208,900
'65.....	61,345	12,870	100,676	28,619	6,291	209,801
1866.....	58,856	12,307	98,890	26,691	8,138	204,882
'67.....	55,494	12,866	88,622	31,193	7,778	195,953
'68.....	58,268	14,951	64,965	51,956	6,182	196,325

“ It will be seen that the *foreigners*, who in 1863 formed only 3 per cent. of the whole emigration, amounted in 1868 to more than 26 per cent. These foreigners consist principally of Germans, Swedes, Danes, &c., who are brought from German and Dutch ports to Hull, and thence carried by railroad to Liverpool, where they embark for the St. Lawrence or New York. Their general destination is the Western States of the Union, where they have formed populous settlements. During the past two years they have been healthy, but it was among them that the cholera broke out in 1866, and they were the principal victims of it both at Liverpool and at sea.

“ Another striking feature in the emigration is the *large decrease*, both absolutely and relatively, in the number of *Irish* emigrants. Excluding foreign emigrants and those whose origin is not stated, the result during the last six years is as follows :—

Year.	Number of Emigrants.	Number of Irish.	Percentage of Irish.
1863.....	192,864	116,391	60·34
'64.....	187,081	115,428	61·69
'65.....	174,891	100,676	57·56
1866.....	170,053	98,890	58·15
'67.....	156,982	88,622	56·45
'68.....	138,187	64,965	47·02

“ As the remittances from America, both in the shape of prepaid passages and money, amounted in 1868 to 530,564*l.*, or nearly as much as in 1867, and much more than in the preceding six years, it may be taken for granted that the decrease in the number of emigrants did not arise from want of means to pay passages. It more probably arose from the gradual improvement in the condition of the people, which the large emigration of previous years could scarcely fail to effect. Of the whole number of emigrants 155,532, or 79·22 per cent., and of the Irish 57,662, or

88 $\frac{3}{4}$ per cent., went to the United States. This is a rather smaller proportion than in 1867, but larger than in 1866 and preceding years. The Irish who proceeded to other places than the United States were 7,303. Of these, 3,692 went to British North America of whom a portion would no doubt eventually find their way to the States. The whole number of emigrants to the United States and British North America amounted to 176,594—of whom 164,513, or 93·16 per cent., went in steam vessels, and only 12,081 in sailing ships. The proportion of the emigrants to America who go in *steamers* has increased every year—in 1863 it was 45 per cent., but it has gradually increased to 93 per cent. in 1868. The comparative shortness of the voyage and the better accommodation in these vessels give them an undeniable advantage as compared with sailing vessels; but as the price of passage is from 30 to 50 per cent. more than in sailing vessels, the general resort to them shows that the emigrants are not in extreme poverty. The remittances from America, before referred to, prevent that. The total remittances, it will be seen, in the twenty-one years from 1848 to 1868 inclusive, amounts to 14,967,568*l.*, but the commissioners repeat that this return is unavoidably imperfect, and that the sums actually sent home are probably much larger.

“The emigration to *Australia and New Zealand* comprised 12,809 persons, being 1,657 less than in 1867, and the smallest emigration since 1847. The average emigration of the twenty years between 1848 and 1867 inclusive was 40,717; the greatest number being in 1852, when no less than 87,881 emigrants proceeded to those colonies; the smallest in 1867, when the number was only 14,466. Of the emigrants of 1852 and the succeeding years, a large portion were selected and sent out by the commissioners.

“The number of persons who left this country during the year 1868 for the Dominion of Canada, was 21,024, of whom 20,810 went to the St. Lawrence, 191 to New Brunswick, and 23 to Nova Scotia. Small as this number appears, compared with the number that go to the United States, it is larger than the emigration of any year since 1854. The emigration to *British North America*, during the thirteen years from 1855 to 1867 inclusive has on an average been only 13,963 a-year, while the average of the emigration to the United States during the same period has been 109,964 a-year. A certain number no doubt find their way to Canada from the United States, but it has been generally calculated that at least as many find their way to the States from Canada. This is especially the case with Swedish and Norwegian emigrants, who in former years have proceeded in considerable numbers to the St. Lawrence on their way to the Western States of the Union.”

V.—*The English and the French Post Offices.*

FROM the *Pall Mall Gazette*:—

“Just at present, when an important postal reform is under the consideration of the authorities at St. Martin’s le Grand, it may be interesting to compare the leading characteristics of the French and English post offices. In both countries an annual report of the actual position of the post office is drawn up and published by its chiefs. At the very outset we are struck by a radical difference in the conception of the duties of a post office in the two countries. With us the necessity of making it a source of revenue is paramount. But our French neighbours (and in this they again are outdone by the Belgians) hold that their first duty is to convey letters as cheaply and as quickly as their means allow. In France, as a matter of fact as well as of principle, every letter is delivered by an agent of the administration to the person to whom it is addressed. No villages are thought too insignificant to require their regular delivery, no cottage is too remote to receive its daily (if necessary) visit from the postman. In England, and more especially in Wales and Scotland, the case, as we know, is quite the reverse. It does not *pay*

the post office to send occasional letters to every village, or regular letters to each out-of-the-way country house, and the result is that they have to be fetched at the receiver's expense. It has been the object of the French Government to reduce from time to time its rates of postage, especially for the interior of the empire; and its efforts have, as might be naturally expected, met with an appreciative response on the part of the public. A comparison between the net results of the English and French post offices will show that in both countries under different systems the results arrived at are in a great degree similar. The cost of the carriage of mails by sea as well as land is included in both cases, and a reference to the second table, where these charges are separately stated, will show how greatly the large subventions given by the French Government to their mail-packet companies have reduced the net profits of their post office.

Total Receipts and Expenses of Post Office.

	Receipts.	Expenses.	Net Revenue.
	£	£	£
<i>a. Great Britain—</i>			
1865.....	4,423,608	2,941,086	1,482,522
'66.....	4,599,667	3,201,681	1,397,986
'67.....	4,668,214	3,246,850	1,421,364
<i>b. France—</i>			
1865.....	3,149,088	2,321,500	827,588
'66.....	3,274,141	2,480,975	793,166
'67.....	3,459,534	2,488,556	970,978

“ In comparing these figures it should be borne in mind that whilst in this country more than 120,000*l.* per annum, received by the Inland Revenue on account of impressed newspaper stamps, appears under the head of postal revenue, the French post office has to deliver gratis to each subscriber three newspapers, viz.:—*Le Bulletin des Lois*, *Le Moniteur des Communes*, and *Le Bulletin des Arrêts de la Cour de Cassation*, and whilst the whole of the receipts for insurance, &c., of letters is in England carried to the post office account, the *droit de timbre*—rising from 20,000*l.* in 1866 to 24,000*l.* in 1868—is in France credited in the budget of l'Administration de l'Enregistrement et des Domaines.

“ But to return to the cost of the packet services of the two countries. The amounts are :—

	England.	France.
	£	£
1865.....	825,185	813,400
'66.....	845,365	949,504
'67.....	809,609	954,188

“ Not long since this country carried all the ocean-going mails of Europe, but of late years, and especially since 1864, the French have discovered the advantages of competition, whilst Germany and Belgium have not been slow in following up the lead set by France; so that we are now in fair way to see at least the continental ocean service wholly in our neighbours' hands.

“ By the preceding tables it will be seen that the post office is as sensitive to the convulsions of trade as any other branch of the revenue, but this reaction is not apparent when we come to look at the actual numbers of letters, &c., passing through the post, and in both countries the results of the crisis are shown in the increased expenditure thrown upon the departments in the year 1866. If we attempt to measure the intellectual activity or commercial enterprise of a country

by the amount of correspondence carried on by its inhabitants, we shall find enough in the post office statistics to strengthen us in our preconceived notions. Any one acquainted, however slightly, with the habits of either Frenchmen or Englishmen, would have little hesitation in crediting the latter with the largest number of letters written and received ; but no one who did not know the keen interest which Frenchmen take in their newspapers would guess that three times as many of these latter pass through the post in France as in England. Of course the number of newspapers passing through the post office is no exact criterion of their circulation throughout the country, and although France can point to no ubiquitous newsagents like Messrs. Smith, yet they are not without imitators. And Lord Hartington's implied argument that England was the only country where a threepenny or a penny newspaper was to be purchased at a railway station at its published price was altogether beside the mark, and calculated to mislead.

Circulation of Letters, &c.

	1865.	1866.	1867.
United Kingdom—			
Total letters delivered	720,467,007	750,000,000	774,831,000
Books, newspapers, &c.	98,538,882	101,784,185	102,273,301
Registered letters	1,800,982	1,955,141	1,964,980
Returned „	—	3,602,995	3,618,888
France—			
Total letters delivered	317,280,954	327,541,394	346,403,990
Books, newspapers.....	275,285,920	290,091,680	306,195,880
Lettres chargées.....	3,774,159	4,016,199	4,386,320
Returned letters (lettres } tombées en rebut) }	2,353,596	1,904,609	2,066,688

“ From the foregoing table it will be seen that Mr. Graves’s calculations are substantially correct, and that the ratio of letters and newspapers or book-packets to the population is as follows :—

	Newspapers, Book Packets, &c.	Letters to each Person.
United Kingdom	28·2	3·77
France.....	11·89	9·09

“ It would also appear that as a rule the French are either less careful in addressing their letters than our fellow-countrymen, or else they shift their abodes more frequently ; the number of letters missent being 1 in 173 in France, against 1 in 236 in England. It is, however, only right to add that in both countries only a very small proportion of these returned letters fail either to reach the intended recipient or to be returned to the writer.

“ There is one other curious point of difference between the French and English systems which is worthy of note. With us it is generally supposed that a letter once posted becomes the property of the person to whom it is addressed, the post office acting as trustee only in the matter. In France every letter becomes, from the moment of posting until it reaches its destination, the property of the Government. The practical benefit gained from the French arrangement is that a writer may, if necessary, correct the address of a letter after it has been posted ; and under certain conditions, may, if he wishes, actually have his letter returned to

him. Furthermore, the French post office acknowledges its responsibility for registered letters which may miscarry through the fault of its employés, and during the year 1868 paid indemnities to correspondents to the amount of 17,300 frs.

“ It may readily be supposed, in the absence of any statistics afforded by our post office, that the minimum charge of 3*d.* for each money order—no matter how small the amount—is a serious bar to the transmission of small sums through the post. The French post office is far more liberal on this point, and has established a system based on an actual percentage on the value of the order (*mandat*). Besides this all sums of less than 10 frs. are free of the *droit de timbre*. It is to be regretted that the report of our post office gives no return of the actual number of money orders issued, or of the proportion borne by the smaller *envois* to the larger.

Money Orders.

	Amount Received for Money Orders.	Value of Orders Issued.
<i>a.</i> Great Britain—	£	£
1865.....	157,113	15,257,385
'66.....	166,430	16,107,999
'67.....	172,085	16,463,487
<i>b.</i> France—		
1865.....	64,048	4,906,257
'66.....	74,104	5,351,412
'67.....	81,599	5,840,199

“ The average value of each order issued by the French office during 1867 was 29 frs. 22 c., slightly lower than the average of the preceding year, but a fraction higher than that for 1865. It should not be forgotten that the system of sending sums of money by checks in France is far less common than with us ; but, on the other hand, bankers' and other bills are freely used for the transmission of money, and the large circulation of these may be gathered by the very large proportion of *lettres chargées* to ordinary letters, as shown in Table III.

“ We have thus briefly summed the various points of contrast between our postal system and that of our neighbours ; but, before concluding, we feel bound to express our surprise at some of the avowals made by members of the present and late Government in a recent debate. How does it happen that it is so much cheaper to send a paper from Palermo to Aberdeen than from the House of Commons to the Strand ? Either the foreign rates for newspapers and book-packets are remunerative or they are not. If they are, it must follow that the profit is greater in carrying a paper for short than for a long distance ; if they are not, what becomes of the theory that the post office is a revenue department ? What, too, for the sake of argument, would prevent a company from collecting all the circulars, newspapers, &c., in the kingdom, shipping them to France or Belgium, and posting them there ? The post office, under existing conventions, would be bound to deliver them, and its revenue would not, we imagine, suffer. We know too, perfectly well, that it costs us twice as much to send a paper from London to Palermo as it does to send the same paper back to England. And this inequality is the more striking when we take into consideration the fact that, whereas foreign post offices admit nearly all printed matter at newspaper rates, we only accord this privilege to such as are registered for transmission abroad. Thus it may happen that the same packet which is sent from the Continent to England for a halfpenny cannot be returned for less than fourpence. In the face of such anomalies can our postal treaties be called reciprocal ? ”

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED MARCH, 1869.

BIRTHS AND DEATHS—QUARTER ENDED JUNE, 1869.

A.—Serial Table of MARRIAGES, BIRTHS, and DEATHS, returned in the Years 1869-63, and in the QUARTERS of those Years.

Calendar YEARS, 1869-63:—Numbers.

Years.....	'69.	'68.	'67.	'66.	'65.	'64.	'63.
Marriages No.	—	176,729	179,154	187,776	185,474	180,387	173,510
Births..... „	—	786,156	768,349	753,870	748,069	740,275	727,417
Deaths „	—	480,677	471,073	500,689	490,909	495,581	473,837

QUARTERS of each Calendar Year, 1869-63.

(I.) MARRIAGES :—Numbers.

<i>Qrs. ended last day of</i>	'69.	'68.	'67.	'66.	'65.	'64.	'63.
March..... No.	37,713	36,670	36,441	37,579	36,807	37,988	35,528
June „	—	45,226	45,589	48,577	45,827	44,599	44,146
September „	—	43,480	44,086	46,257	45,852	44,675	41,932
December „	—	51,353	53,038	55,363	56,988	53,125	51,904

(II.) BIRTHS :—Numbers.

<i>Qrs. ended last day of</i>	'69.	'68.	'67.	'66.	'65.	'64.	'63.
March..... No.	204,055	198,594	194,763	196,753	194,130	192,947	186,341
June „	188,459	202,892	199,660	192,437	192,988	188,835	189,340
September „	—	192,467	190,782	179,086	181,941	181,015	173,439
December „	—	192,203	183,144	185,594	179,010	177,478	178,297

(III.) DEATHS :—Numbers.

<i>Qrs. ended last day of</i>	'69.	'68.	'67.	'66.	'65.	'64.	'63.
March..... No.	133,437	120,095	134,008	138,136	140,410	142,977	128,096
June „	118,849	109,984	112,355	128,551	115,892	116,880	118,121
September „	—	130,502	108,513	116,650	113,362	112,223	112,504
December „	—	120,096	116,197	117,352	121,245	123,451	115,116

Annual Rates of MARRIAGES, BIRTHS, and DEATHS, per 1,000 PERSONS
LIVING in the Years 1869-63, and the QUARTERS of those Years.

Calendar YEARS, 1869-63:—General Ratios.

YEARS.....	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
Estmtd. Popln. of England in thousands in middle of each Year....	21,870	—	21,649	21,430	21,210	20,991	20,772	20,554
Persons Mar- ried Per ct. }	—	16·92	16·32	16·72	17·70	17·68	17·36	16·88
Births „	—	35·34	36·31	35·85	35·54	35·64	35·64	35·39
Deaths.... „	—	22·48	22·20	21·98	23·61	23·39	23·86	23·05

QUARTERS of each Calendar Year, 1869-63.

(I.) PERSONS MARRIED :—Ratio per 1,000.

Qrs. ended last day of	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
March Per ct.	14·04	14·09	13·64	13·84	14·42	14·28	14·72	14·08
June..... „	—	17·20	16·78	17·08	18·40	17·54	17·24	17·26
Septmbr. „	—	16·37	15·92	16·30	17·28	17·32	17·04	16·16
Decembr. „	—	19·89	18·76	19·56	20·64	21·46	20·22	19·96

(II.) BIRTHS :—Ratio per 1,000.

Qrs. ended last day of	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
March Per ct.	37·98	36·85	36·94	37·00	37·77	37·65	37·40	36·91
June..... „	34·61	36·65	37·64	37·42	36·44	36·92	36·51	37·00
Septmbr. „	—	34·04	35·23	35·28	33·46	34·34	34·53	33·43
Decembr. „	—	33·79	35·09	33·78	34·58	33·70	33·76	34·28

(III.) DEATHS :—Ratio per 1,000.

Qrs. ended last day of	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
March Per ct.	24·84	25·36	22·34	25·46	26·52	27·23	27·72	25·38
June..... „	21·83	22·03	20·40	21·06	24·34	22·17	22·60	23·08
Septmbr. „	—	20·63	23·89	20·06	21·79	21·40	21·41	21·69
Decembr. „	—	21·90	21·93	21·43	21·87	22·83	23·49	22·13

B.—Comparative Table of CONSOLS, PROVISIONS, PAUPERISM, and TEMPERATURE in each of the Nine QUARTERS ended June, 1869.

1	2	3	4	5		6	7	8		9	10
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England in Dis- count.	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the <i>Mean</i> Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism.		Mean Tem- pera- ture.		
				Beef.	Mutton.		Quarterly Average of the Number of Paupers relieved on the <i>last day</i> of each week.*				
							In-door.	Out-door.			
1867	£		<i>s. d.</i>	<i>d. d. d.</i>	<i>d. d. d.</i>	<i>s. s. s.</i>				°	
June 30	92 $\frac{4}{8}$	2·8	63 11	4 $\frac{3}{4}$ —6 $\frac{3}{4}$ 5 $\frac{3}{4}$	5 $\frac{1}{4}$ —7 $\frac{1}{4}$ 6 $\frac{1}{4}$	135—175 155	134,233	779,158		53·5	
Sept. 30	94 $\frac{4}{8}$	2·2	65 4	4 $\frac{3}{4}$ —6 $\frac{3}{4}$ 5 $\frac{3}{4}$	5—7 6	100—155 127	129,860	743,965		59·7	
Dec. 31	94 $\frac{3}{8}$	2·0	67 11	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	4 $\frac{1}{2}$ —6 $\frac{1}{2}$ 5 $\frac{1}{2}$	110—155 132	145,886	771,754		42·5	
1868											
Mar. 31	93	2·0	72 2	4 $\frac{1}{4}$ —6 $\frac{1}{2}$ 5 $\frac{3}{8}$	4 $\frac{1}{4}$ —6 $\frac{1}{2}$ 5 $\frac{3}{8}$	125—170 147	159,716	860,165		41·4	
June 30	94 $\frac{3}{8}$	2·0	71 10	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	4 $\frac{3}{4}$ —7 5 $\frac{7}{8}$	130—170 150	142,588	800,944		55·8	
Sept. 30	94 $\frac{2}{8}$	2·0	59 1	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	4 $\frac{3}{4}$ —6 $\frac{3}{4}$ 5 $\frac{3}{4}$	120—175 147	138,284	778,804		63·9	
Dec. 31	94 $\frac{3}{8}$	2·4	51 11	4 $\frac{1}{2}$ —7 5 $\frac{3}{4}$	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	70—140 105	152,733	797,546		45·1	
1869											
Mar. 31	92 $\frac{7}{8}$	3·0	50 2	4 $\frac{3}{4}$ —7 $\frac{1}{4}$ 6	4 $\frac{3}{4}$ —7 $\frac{1}{2}$ 6 $\frac{1}{8}$	70—140 105	162,308	850,883		41·3	
June 30	93 $\frac{1}{8}$	4·2	45 7	4 $\frac{3}{4}$ —7 $\frac{1}{2}$ 6 $\frac{1}{8}$	5—7 $\frac{3}{4}$ 6 $\frac{3}{8}$	60—130 95	151,404	835,023		52·0	

* Exclusive of vagrants and pauper lunatics in asylums.

C.—General Average Death-Rate Table:—Annual Rate of Mortality to 1,000 of the Population in the Eleven Divisions of England.

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years, 1851-60.	1868.				1869.	
		Year.	Spring Quarter.	Summer Quarter.	Autumn Quarter.	Winter Quarter.	Spring Quarter.
I. London	23·63	23·57	21·88	24·58	24·52	25·43	22·25
II. South-Eastern counties	19·55	18·91	17·01	21·18	18·31	21·39	18·71
III. South Midland „	20·44	19·81	17·13	23·08	19·00	21·92	19·01
IV. Eastern counties	20·58	19·57	18·05	21·48	19·31	22·42	20·96
V. South-Western counties	20·01	18·12	16·94	17·04	18·29	21·77	20·62
VI. West Midland „	22·35	21·05	19·19	23·29	20·39	23·58	20·06
VII. North Midland „	21·10	21·26	19·89	24·09	20·48	24·35	21·74
VIII. North-Western „	25·51	26·14	23·92	28·80	25·54	28·13	23·63
IX. Yorkshire	23·09	24·66	22·51	27·99	25·60	28·08	24·79
X. Northern counties	21·99	24·12	21·95	25·35	24·39	26·05	22·63
XI. Monmouthshire and Wales	21·28	19·70	19·89	18·45	18·35	23·12	22·07

Note.—The mortality for the year 1868 is the mean of the quarterly rates.

D.—*Special Average Death-Rate Table*:—ANNUAL RATE of MORTALITY per 1,000 in TOWN and COUNTRY DISTRICTS of ENGLAND in each Quarter of the Years 1869-67.

	Area in Statute Acres.	Population Enumerated. 1861.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
				1869.	Mean '59-68.	1868.	1867.
In 142 Districts, and 56 Sub-districts, comprising the <i>Chief Towns</i>	3,287,151	10,930,841	{ March .. June Sept. Dec. Year	26.55 22.78 — — —	27.24 23.39 22.90 24.31 24.46	24.03 22.20 26.49 24.15 24.22	27.23 21.99 22.47 23.92 23.90
In the remaining Districts and Sub- districts of Eng- land and Wales, comprising chiefly <i>Small Towns</i> and <i>Country Parishes</i> }	34,037,732	9,135,383	{ March .. June Sept. Dec. Year	22.56 20.56 — — —	23.02 20.32 17.79 18.88 20.00	20.12 18.04 20.44 18.98 19.40	23.16 19.84 16.93 18.21 19.54

Note.—The three months, January, February, March, contain 90, in leap year 91 days; the three months, April, May, June, 91 days; each of the last two quarters of the year 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 365.25 days, and 366 and 365.25 days in leap year.

E.—*Special Town Table*:—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE and RAINFALL in last Spring Quarter, in Fourteen Large Towns.

Cities, &c.	Estimated Population in the Middle of the Year 1869.	Births in 13 Weeks ending 3rd July, 1869.	Deaths in 13 Weeks ending 3rd July, 1869.	Annual Rate to 1,000 Living during the 13 Weeks ending 3rd July.		Mean Temperature in 13 Weeks ending 3rd July, 1869.	Rainfall in Inches in 13 Weeks ending 3rd July, 1869.
				Births.	Deaths.		
Total of 14 large towns....	6,546,587	57,151	39,330	35.04	24.11	50.7	6.45
London	3,170,754	26,570	17,575	33.63	22.25	52.5	5.45
Bristol (city)	169,423	1,452	912	34.40	21.61	52.6	7.19
Birmingham (borough)....	360,846	3,168	1,642	35.24	18.26	50.7	8.55
Liverpool (borough)	509,052	4,598	3,461	36.25	27.29	50.8	6.99
Manchester (city)	370,892	3,287	2,309	35.57	24.99	52.0	5.51
Salford (borough)	119,350	1,215	719	40.86	24.18	50.4	5.96
Sheffield (borough)	239,752	2,209	1,465	36.98	24.53	50.5	8.12
Bradford (borough)	138,522	1,349	852	39.09	24.69	50.4	6.33
Leeds (borough).....	253,110	2,386	1,410	37.84	22.36	50.6	6.44
Hull (borough)	126,682	1,009	758	31.97	24.02	—	—
Newcastle - on - Tyne } (borough)	130,503	1,230	779	37.83	23.96	47.3	6.88
Edinburgh (city)	178,002	1,736	1,465	39.14	33.03	49.8	5.00
Glasgow (city)	458,937	4,912	4,167	42.96	36.44	49.4	4.26
Dublin (city and some } suburbs)	320,762	2,030	1,816	25.40	22.72	51.6	7.23
Berlin	(1867.) 702,437	6,996	5,853	39.97	33.44	56.6	—
Vienna.....	(1863.) 560,000	—	4,671	—	33.48	60.5	—

F.—Divisional Table:—MARRIAGES Registered in Quarters ended 31st March, 1869-67; and BIRTHS and DEATHS in Quarters ended 30th June, 1869-67.

1	2	3	4	5	6
DIVISIONS. (England and Wales.)	AREA in Statute Acres.	POPULATION, 1861. (Persons.)	MARRIAGES in Quarters ended 31st March.		
			1869.	1868.	1867.
		No.	No.	No.	No.
ENGLD. & WALES....Totals	37,324,883	20,066,224	37,713	36,670	36,441
I. London	77,997	2,803,989	6,376	6,185	6,379
II. South-Eastern	4,065,935	1,847,661	2,942	2,860	2,887
III. South Midland	3,201,290	1,295,515	1,723	1,646	1,607
IV. Eastern	3,214,099	1,142,562	1,535	1,495	1,435
V. South-Western	4,993,660	1,835,714	2,836	2,845	2,822
VI. West Midland	3,862,732	2,436,116	4,334	3,996	4,114
VII. North Midland.....	3,543,397	1,289,380	2,030	2,056	2,018
VIII. North-Western.....	2,000,227	2,935,540	6,701	6,754	6,594
IX. Yorkshire	3,654,636	2,015,541	4,532	4,251	4,186
X. Northern	3,492,322	1,151,372	2,494	2,428	2,239
XI. Monmthsh. & Wales	5,218,588	1,312,834	2,210	2,154	2,160

7	8	9	10	11	12	13
DIVISIONS. (England and Wales.)	BIRTHS in Quarters ended 30th June.			DEATHS in Quarters ended 30th June.		
	1869.	1868.	1867.	1869.	1868.	1867.
	No.	No.	No.	No.	No.	No.
ENGLD. & WALES....Totals	188,459	202,892	199,660	118,849	109,984	112,355
I. London	26,570	28,629	28,362	17,575	17,043	15,619
II. South-Eastern	16,035	16,864	16,680	9,546	8,568	8,963
III. South Midland.....	11,205	12,090	12,008	6,388	5,726	6,586
IV. Eastern	9,318	9,913	10,032	6,093	5,235	5,606
V. South-Western	14,173	15,089	15,203	9,575	7,851	8,849
VI. West Midland	22,894	25,006	24,905	13,556	12,797	12,804
VII. North Midland.....	11,320	12,296	12,303	7,326	6,662	6,618
VIII. North-Western.....	30,547	33,565	31,888	19,765	19,680	19,479
IX. Yorkshire	20,763	22,229	22,121	13,716	12,308	12,657
X. Northern	13,258	13,862	13,041	7,469	7,121	7,598
XI. Monmthsh. & Wales	12,376	13,349	13,117	7,840	6,993	7,576

REMARKS on the WEATHER during the QUARTER ended 30th June, 1869. By JAMES GLAISHER, ESQ., F.R.S., &c., Secretary of the Meteorological Society.

The mean temperature of April was $50^{\circ}3$, being $4^{\circ}3$ higher than the average of ninety-eight years, higher than the corresponding temperatures in 1866, 1867, and 1868, when $47^{\circ}9$, $49^{\circ}0$, and $48^{\circ}1$ respectively were recorded, but lower than in 1865, by $2^{\circ}0$.

The mean temperature of May was $50^{\circ}5$, being $2^{\circ}1$ lower than the average of ninety-eight years, and lower than the corresponding values in 1868 by $6^{\circ}8$, but higher than in 1866, when $50^{\circ}1$ was recorded.

The mean temperature of June was $55^{\circ}3$, being $2^{\circ}9$ lower than the average of ninety-eight years, and lower than any corresponding value since 1824, with the sole exceptions of 1830 and 1860.

G.—General Meteorological Table, Quarter ended June, 1869.

[Abstracted from the particulars supplied to the Registrar-General by JAMES GLAISHER, ESQ., F.R.S., &c.]

1869. Months.		Temperature of									Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.													
		Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.											
		Mean.	Diff. from Average of 98 Years.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.																
April ...	50.3	0	+4.3	0	+3.4	0	47.5	0	+3.6	0	44.6	0	+4.1	0	19.8	0	+1.4	0	49.9	In.	.295	In.	+ .042	Gr.	3.4	+0.5
May ...	50.5	0	-2.1	0	-2.6	0	48.0	0	-1.3	0	45.3	0	-0.3	0	17.0	0	-3.4	0	53.9	.303		-.001	3.4	-0.1		
June ...	55.3	0	-2.9	0	-3.9	0	51.8	0	-2.9	0	48.4	0	-2.4	0	21.4	0	+0.4	0	56.4	.340		-.033	3.8	-0.4		
Mean ...	52.0	0	-0.2	0	-1.0	0	49.1	0	-0.2	0	46.1	0	+0.5	0	19.4	0	-0.5	0	53.4	.313		-.003	3.5	0.0		

1869. Months.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Mean.	Diff. from Average of 28 Years.	Amtnt.	Diff. from Average of 54 Years.		Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.
											At or below 30°.	Between 30° and 40°.	Above 40°.		
April ...	81	+ 2	In.	In.	Gr.	Gr.	In.	In.	Miles.	5	14	11	24.2	52.5	
May ...	83	+ 7	29.651	+ .126	538	- 4	3.4	+1.2	249	3	11	17	26.4	50.0	
June ...	78	+ 4	29.919	-.112	538	+ 7	1.1	-0.9	219	1	10	19	25.7	53.5	
Mean ...	81	+ 4	29.800	+ .017	539	+ 1	Sum 5.5	Sum -0.4	Mean 246	Sum 9	Sum 35	Sum 47	Lowest 24.2	Highest 53.5	

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies below the average, and that the sign (+) plus signifies above the average.

H.—Special Meteorological Table, Quarter ended 30th June, 1869.

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermo- meter.	Lowest Reading of the Thermo- meter.	Range of Tem- perature in the Quarter.	Mean Monthly Range of Tem- perature.	Mean Daily Range of Tem- perature.	Mean Tem- perature of the Air.	Mean Degree of Hu- midity.
	in.	°	°	°	°	°	°	
Guernsey	29·638	79·0	33·0	46·0	28·7	11·1	50·5	90
Osborne	29·651	83·2	27·2	56·0	40·5	17·2	51·7	86
Barnstaple	29·614	79·0	35·5	43·5	35·7	16·2	53·8	85
Royal Observatory	29·660	87·5	29·3	58·2	46·3	19·4	52·0	81
Royston	29·689	86·8	29·4	57·4	46·9	20·7	51·6	81
Lampeter	29·710	80·0	26·0	54·0	45·3	18·9	51·4	76
Norwich	29·685	86·9	31·5	55·4	42·0	15·7	51·4	77
Derby	29·647	82·0	34·0	48·0	37·3	16·0	50·7	77
Liverpool	29·681	76·1	32·0	44·1	33·6	13·1	50·2	77
Stonyhurst.....	29·681	75·0	32·9	42·1	34·7	15·1	49·3	79
Leeds	—	86·0	31·0	55·0	43·0	19·5	51·5	73
North Shields ...	29·761	73·0	32·2	40·8	32·9	14·6	48·2	80

10	11	12	13	14	15	16	17	18
NAMES OF STATIONS.	WIND.					Mean Amount of Cloud.	RAIN.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount collected.
		N.	E.	S.	W.			
								in.
Guernsey	1·3	9	7	6	8	4·6	32	8·0
Osborne	2·3	9	8	6	7	6·2	31	8·2
Barnstaple	1·3	5	6	8	11	3·7	35	7·3
Royal Observatory	0·3	7	8	7	8	6·6	40	5·5
Royston	—	12	4	6	8	6·6	43	6·9
Lampeter	0·6	7	8	7	8	6·3	41	6·6
Norwich	—	10	5	8	7	—	27	6·4
Derby	—	8	8	5	9	—	41	6·9
Liverpool	1·2	7	8	4	11	6·1	39	7·5
Stonyhurst.....	—	5	9	4	13	7·0	56	8·2
Leeds	1·9	11	7	4	8	6·5	33	6·2
North Shields ...	1·5	9	8	6	7	5·6	36	5·7

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER
ENDED 30TH JUNE, 1869.

I.—*Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population, Estimated to the Middle of each Year, during each Quarter of the Years 1869-65 inclusive.*

	1869.		1868.		1867.		1866.		1865.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
1st Quarter—										
Births	28,429	3·54	28,736	3·60	27,969	3·52	28,883	3·66	28,594	3·65
Deaths	20,431	2·54	18,036	2·26	19,981	2·51	19,095	2·42	20,804	2·65
Marriages ..	5,291	0·66	5,287	0·66	5,332	0·66	5,642	0·71	5,416	0·69
Mean Tem- perature }	40°·0		40°·6		36°·5		38°·0		35°·3	
2nd Quarter—										
Births	29,472	3·67	31,025	3·89	30,393	3·83	29,808	3·78	30,318	3·86
Deaths	19,449	2·42	16,928	2·12	17,464	2·20	18,575	2·35	17,074	2·17
Marriages ..	5,596	0·69	5,660	0·71	5,602	0·70	6,034	0·76	5,707	0·72
Mean Tem- perature }	48°·4		51°·0		49°·0		49°·3		51°·5	
3rd Quarter—										
Births	—	—	28,393	3·56	27,888	3·51	27,204	3·45	27,306	3·48
Deaths	—	—	16,662	2·09	15,106	1·90	15,470	1·95	15,924	2·02
Marriages ..	—	—	4,804	0·59	5,047	0·63	5,104	0·64	5,343	0·68
Mean Tem- perature }	—		57°·4		55°·2		54°·4		57°·5	
4th Quarter—										
Births	—	—	27,519	3·45	27,865	3·51	27,772	3·52	26,852	3·42
Deaths	—	—	17,760	2·22	16,473	2·07	18,210	2·30	17,089	2·17
Marriages ..	—	—	6,202	0·77	6,540	0·82	6,908	0·87	7,145	0·91
Mean Tem- perature }	—		41°·5		42°·3		43°·5		43°·4	
Year—										
Population.	—		3,188,125		3,170,769		3,153,413		3,136,057	
Births	—	—	115,673	3·63	114,115	3·59	113,667	3·60	113,070	3·60
Deaths	—	—	69,386	2·17	69,024	2·17	71,350	2·26	70,891	2·26
Marriages ..	—	—	21,853	0·68	22,521	0·70	23,688	0·75	23,611	0·75

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending 30th June, 1869, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

	Population.		Total Births.			Illegitimate Births.		
	Census, 1861.	Estimated to Middle of 1869.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,205,481	29,472	3·67	27	2,731	9·2	10·8
131 town districts	1,615,475	1,780,372	18,053	4·05	24	1,624	8·9	11·2
885 rural ,,	1,446,819	1,425,109	11,419	3·25	31	1,107	9·7	10·3

	Population.		Deaths.			Marriages.		
	Census, 1861.	Estimated to Middle of 1869.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,205,481	19,449	2·42	41	5,596	0·69	143
131 town districts	1,615,475	1,780,372	12,934	2·90	34	3,671	0·82	121
885 rural ,,	1,446,819	1,425,109	6,515	1·82	54	1,925	0·54	185

Note.—The constitution of several of the districts was altered on January 1, 1868; consequently the numbers of the population in the town and rural districts differ somewhat from those of previous years.

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 30th June, 1869.*

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	9·2						
Northern	8·0	Shetland ...	3·7	Forfar	12·2	Lanark.....	7·3
North-Western	7·8	Orkney	6·3	Perth	10·4	Linlithgow .	8·5
North-Eastern	13·0	Caithness ...	10·4	Fife	8·1	Edinburgh .	8·4
East Midland ..	10·4	Sutherland...	9·7	Kinross	6·2	Haddington	7·5
West Midland..	7·0	Ross and } Cromarty }	4·3	Clackman- } nan	7·0	Berwick	10·6
South-Western	8·0	Inverness ...	10·9	Stirling	6·5	Peebles.....	10·2
South-Eastern.	8·5	Nairn	13·5	Dumbarton ..	6·7	Selkirk	9·0
Southern	13·9	Elgin	13·5	Argyll	8·2	Roxburgh ..	10·9
		Banff	11·9	Bute	6·6	Dumfries ...	14·7
		Aberdeen ...	13·2	Renfrew.....	7·1	Kirkcud- } bright .. }	15·1
		Kincardine...	12·4	Ayr.....	9·0	Wigtown ...	15·3

IV.—*Divisional Table*:—MARRIAGES, BIRTHS, and DEATHS Registered in the Quarter ended 30th June, 1869.

1	2	3	4	5	6
DIVISIONS. (Scotland)	AREA in Statute Acres.	POPULATION, 1861. (Persons.)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
SCOTLAND Totals	19,639,377	3,062,294	5,596	29,472	19,449
I. Northern	2,261,622	130,422	100	760	570
II. North-Western.....	4,739,876	167,329	142	987	799
III. North-Eastern	2,429,594	366,783	578	3,285	1,674
IV. East Midland	2,790,492	523,822	887	4,562	2,761
V. West Midland	2,693,176	242,507	363	2,130	1,349
VI. South-Western.....	1,462,397	1,008,253	2,216	11,864	8,336
VII. South-Eastern	1,192,524	408,962	964	4,178	2,893
VIII. Southern	2,069,696	214,216	346	1,706	1,067

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY of MARRIAGES, in the Quarter ended 31st March, 1869; and BIRTHS and DEATHS, in the Quarter ended 30th June, 1869.

COUNTRIES.	[000's omitted].		Marriages.	Per 1,000 of Popu- lation.	Births.	Per 1,000 of Popu- lation.	Deaths.	Per 1,000 of Popu- lation.
	Area in Statute Acres.	Popu- lation, 1861. (Persons.)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and Wales }	37,325,	20,066,	37,713	1·9	188,459	9·4	118,849	5·9
Scotland	19,639,	3,062,	5,291	1·7	29,472	9·6	19,449	6·3
Ireland :	20,322,	5,799,	10,200	1·8	39,507	6·8	24,224	4·2
GREAT BRITAIN AND IRELAND }	77,286,	28,927,	53,204	1·8	257,438	8·9	162,522	5·6

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios are much under those of England and Scotland.—*ED. S. J.*

Trade of United Kingdom, 1869-68-67.—Distribution of Exports from United Kingdom, according to the Declared Real Value of the Exports; and the Computed Real Value (Ex-duty) of Imports at Port of Entry, and therefore including Freight and Importer's Profit.

Merchandise (excluding Gold and Silver), Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Three Months.					
	1869.		1868.		1867.	
	Imports from	Exports to	Imports from	Exports to	Imports from	Exports to
I.—FOREIGN COUNTRIES:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland } Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium } Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain } (with Gibraltar and Canaries) }	3,035,	672,	3,287,	457,	4,265,	552,
8,647,	8,920,	6,016,	8,994,	5,414,	7,681,	
10,758,	3,719,	9,891,	3,940,	11,566,	4,699,	
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta } Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt }	1,915,	1,979,	1,646,	1,653,	845,	1,893,
5,668,	3,635,	5,937,	3,753,	6,335,	3,736,	
Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco }	92,	78,	52,	34,	50,	77,
Western Africa..... }	241,	253,	380,	242,	208,	228,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorla Islands..... }	11,	47,	—	48,	3,	38,
Indian Seas, Siam, Sumatra, Java, Philip- pines; other Islands }	333,	318,	377,	418,	39,	626,
South Sea Islands }	—	—	19,	—	—	—
China, including Hong Kong.....	3,323,	2,325,	2,948,	2,263,	3,081,	1,629,
United States of America	9,788,	7,761,	12,163,	5,715,	8,906,	7,449,
Mexico and Central America	457,	168,	275,	302,	324,	205,
Foreign West Indies and Hayti.....	520,	353,	519,	702,	721,	652,
South America (Northern), New Granada, Venezuela, and Ecuador } " (Pacific), Peru, Bolivia, Chili, and Patagonia }	295,	592,	329,	696,	215,	566,
" (Atlantic) Brazil, Uruguay, and Buenos Ayres }	963,	707,	1,434,	625,	1,140,	983,
1,894,	2,130,	1,700,	1,740,	1,533,	2,471,	
Whale Fisheries; Grnld., Davis' Straits, Southn. Whale Fishery, & Falkland Islands }	—	4,	—	4,	—	—
Total—Foreign Countries	47,940,	33,661,	46,973,	31,586,	44,645,	33,485,
II.—BRITISH POSSESSIONS:						
British India, Ceylon, and Singapore	4,740,	4,466,	3,610,	5,618,	2,656,	4,903,
Austral. Cols.—N. So. W., Vict., and Queensld. " " So. Aus., W. Aus., Tasm., and N. Zealand	1,879,	2,000,	617,	1,516,	1,488,	1,064,
527,	631,	493,	646,	229,	570,	
British North America	246,	652,	440,	618,	385,	746,
" W. Indies with Btsh. Guiana & Honduras	760,	613,	896,	649,	687,	638,
Cape and Natal	516,	394,	412,	387,	436,	596,
Port. W. Co. of Af., Ascension and St. Helena	91,	168,	119,	143,	92,	162,
Auritius	323,	75,	430,	127,	304,	116,
Channel Islands	70,	143,	71,	132,	82,	101,
Total—British Possessions.....	9,152,	9,142,	7,088,	9,836,	6,359,	8,896,
General Total£	57,092,	42,803,	54,061,	41,422,	51,004,	42,381,

IMPORTS. — (United Kingdom.) — First Five Months (*January — May*), 1869-68-67-66-65.—*Computed Real Value (Ex-duty), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

(First Five Months.) [000's omitted.] FOREIGN ARTICLES IMPORTED.		1869.	1868.	1867.	1866.	1865.
		£	£	£	£	£
RAW MATLS.— <i>Textile.</i>	Cotton Wool	21,969,	25,515,	25,884,	38,398,	17,183,
	Wool (Sheep's) ..	6,579,	4,014,	6,302,	6,073,	4,704,
	Silk	6,252,	6,499,	6,537,	6,232,	5,734,
	Flax	1,212,	1,189,	1,124,	1,050,	876,
	Hemp	1,597,	1,098,	798,	1,064,	560,
	Indigo	1,537,	819,	975,	720,	602,
		39,146,	39,134,	41,620,	53,537,	29,659,
„ „ <i>Various.</i>	Hides	892,	819,	713,	952,	693,
	Oils	1,376,	1,446,	1,401,	1,289,	1,105,
	Metals	1,544,	1,489,	1,333,	1,552,	1,441,
	Tallow	635,	442,	243,	532,	394,
	Timber.....	1,183,	1,140,	993,	1,496,	1,572,
		5,630,	5,336,	4,683,	5,821,	5,205,
„ „ <i>Agretil.</i>	Guano	335,	907,	429,	623,	865,
	Seeds	1,023,	1,113,	936,	1,058,	1,162,
		1,358,	2,020,	1,365,	1,681,	2,027,
TROPICAL &c., PRODUCE.	Tea	4,398,	4,737,	4,315,	4,359,	4,008,
	Coffee	1,414,	1,488,	1,183,	991,	1,153,
	Sugar & Molasses	5,026,	5,321,	5,504,	4,747,	3,612,
	Tobacco	444,	666,	588,	876,	1,003,
	Rice	873,	639,	156,	209,	201,
	Fruits	640,	624,	162,	62,	181,
	Wines	2,464,	2,389,	2,088,	2,063,	1,494,
	Spirits	986,	862,	740,	844,	628,
		16,245,	16,726,	14,736,	14,151,	12,280,
FOOD	Grain and Meal.	11,979,	17,370,	15,375,	10,891,	5,704,
	Provisions	5,399,	4,648,	3,296,	3,627,	3,473,
		17,378,	22,018,	18,671,	14,518,	9,177,
Remainder of Enumerated Articles		6,920,	4,933,	2,366,	2,321,	1,707,
TOTAL ENUMERATED IMPORTS		86,677,	90,167,	83,441,	92,029,	60,005,
Add for UNENUMERATED IMPORTS (say)		21,669,	22,542,	20,860,	23,007,	15,014,
TOTAL IMPORTS		108,346,	112,709,	104,301,	115,036,	75,069,

EXPORTS. — (United Kingdom.) — First Six Months (*January — June*),
1869-68-67-66-65.—*Declared Real Value, at Port of Shipment, of Articles of*
BRITISH and IRISH Produce and Manufactures Exported from United Kingdom.

(First Six Months.) [000's omitted.] BRITISH PRODUCE, &C., EXPORTED.		1869.	1868.	1867.	1866.	1865.
	£	£	£	£	£	£
MANFRES.— <i>Textile.</i> Cotton Manufactures ..	25,855,	24,322,	27,501,	30,418,	21,630,	
,, Yarn	6,996,	7,664,	7,131,	6,681,	3,959,	
Woollen Manufactures	10,840,	8,571,	9,878,	10,534,	8,034,	
,, Yarn	2,771,	3,423,	2,775,	2,181,	2,436,	
Silk Manufactures.....	1,051,	1,051,	728,	869,	901,	
,, Yarn	94,	99,	100,	115,	128,	
Linen Manufactures	3,473,	3,354,	3,797,	4,918,	4,056,	
,, Yarn	1,131,	1,213,	1,334,	1,165,	1,069,	
	52,211,	49,697,	53,244,	56,881,	42,213,	
<i>Sewed.</i> Apparel	1,148,	992,	1,027,	1,347,	1,171,	
Haberdy. and Milnry.	2,229,	2,102,	2,196,	2,803,	2,133,	
	3,377,	3,094,	3,223,	4,150,	3,304,	
METALS Hardware	2,027,	1,760,	1,896,	2,131,	1,989,	
Machinery	2,278,	2,004,	2,376,	2,049,	2,593,	
Iron	9,053,	6,918,	6,964,	7,498,	5,829,	
Copper and Brass.....	1,545,	1,577,	1,441,	1,427,	1,614,	
Lead and Tin	2,336,	1,939,	1,621,	1,632,	1,282,	
Coals and Culm	2,298,	2,586,	2,463,	2,416,	2,055,	
	19,537,	16,784,	16,761,	17,153,	15,362,	
Ceramic Manufcts. Earthenware and Glass	1,316,	1,197,	1,236,	1,198,	1,055,	
Indigenous Mnfrs. Beer and Ale.....	1,044,	1,053,	1,111,	1,159,	1,210,	
Butter	135,	121,	131,	178,	134,	
Cheese	45,	53,	60,	85,	47,	
Candles	88,	110,	93,	110,	46,	
Salt	201,	246,	206,	199,	97,	
Spirits	97,	85,	69,	78,	129,	
Soda	666,	754,	793,	760,	514,	
	2,276,	2,422,	2,463,	2,569,	2,177,	
Various Manufcts. Books, Printed	304,	308,	269,	276,	213,	
Furniture	100,	82,	89,	117,	148,	
Leather Manufactures	1,250,	1,123,	846,	940,	1,197,	
Soap	100,	126,	143,	104,	85,	
Plate and Watches	234,	160,	197,	203,	195,	
Stationery	221,	188,	182,	178,	188,	
	2,209,	1,987,	1,726,	1,818,	2,026,	
Remainder of Enumerated Articles	5,854,	4,973,	4,861,	4,886,	4,449,	
Unenumerated Articles.....	4,705,	4,447,	4,099,	4,202,	3,542,	
TOTAL EXPORTS.....	91,485,	84,601,	87,612,	92,857,	74,128,	

SHIPPING. — FOREIGN TRADE. — (United Kingdom.) — First Six Months
(January—June), 1869-68-67-66.—Vessels Entered and Cleared with Cargoes,
including repeated Voyages, but excluding Government Transports.

(First Six Months.) ENTERED:—	1869.			1868.		1867.		1866.	
	Vessels.	Tonnage (000's omitted.)	Average Tonnage.	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)
<i>Vessels belonging to—</i>	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Russia	244	84,	344	184	61,	138	53,	167	58
Sweden	537	92,	171	476	85,	457	81,	437	81,
Norway	2,044	472,	236	1,717	400,	1,580	350,	1,571	344,
Denmark	944	113,	120	1,042	113,	1,155	126,	988	103,
Prussia and Ger. Sts.	1,696	462,	272	1,741	480,	1,632	417,	1,798	443,
Holland and Belgium....	1,050	148,	144	909	131,	871	112,	1,065	141,
France	1,102	109,	99	1,051	102,	1,227	113,	1,643	155,
Spain and Portugal	256	87,	340	268	89,	242	79,	188	59,
Italy & other Eupn. Sts.	455	176,	396	269	97,	306	97,	531	164,
United States	137	139,	1,015	270	277,	202	213,	230	233,
All other States	3	2,	666	7	3,	6	3,	5	2,
United Kingdm. & } Depds.....	8,468	1,884,	223	7,934	1,838,	7,816	1,644,	8,623	1,783,
	12,080	4,381,	363	11,630	4,101,	11,352	3,969,	12,149	4,111,
<i>Totals Entered....</i>	20,548	6,265,	305	19,564	5,939,	19,168	5,613,	20,772	5,894,
CLEARED:—									
Russia	223	88,	395	215	80,	175	57,	200	77,
Sweden	487	91,	187	450	79,	427	82,	436	85,
Norway	1,278	277,	217	1,111	242,	1,006	327,	1,004	205,
Denmark	993	117,	118	1,116	125,	1,284	143,	935	101,
Prussia and Ger. Sts.	2,247	552,	245	2,537	618,	2,342	477,	2,297	496,
Holland and Belgium....	1,032	169,	164	1,094	178,	915	128,	1,033	170,
France	1,666	199,	119	2,017	218,	2,115	153,	2,093	227,
Spain and Portugal	229	82,	358	232	83,	215	81,	170	53,
Italy & other Eupn. Sts.	564	229,	406	411	158,	392	122,	602	200,
United States	186	177,	951	343	324,	259	257,	283	283,
All other States	9	2,	222	7	2,	8	2,	10	5,
United Kingdm. & } Depds.....	8,914	1,983,	222	9,533	2,107,	9,138	1,830,	9,063	1,902,
	15,344	5,415,	353	15,849	5,336,	14,510	4,419,	14,672	4,875,
<i>Totals Cleared...</i>	24,258	7,398,	305	25,382	7,443,	23,648	6,249,	23,735	6,777,

GOLD AND SILVER BULLION AND SPECIE. — IMPORTED AND EXPORTED. — (United Kingdom.) — *Computed Real Value for the First Six Months (January—June), 1869-68-67.*

[000's omitted.]

(First Six Months.)	1869.		1868.		1867.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
Imported from:—	£	£	£	£	£	£
Australia	3,367,	1,	3,204,	—	2,287,	—
So. Amca. and W. } Indies	1,032,	1,291,	927,	1,770,	857,	2,234,
United States and } Cal.	277,	510,	4,605,	1,238,	2,357,	612,
	4,676,	1,802,	8,736,	3,008,	5,501,	2,846,
France	474,	1,184,	193,	658,	337,	502,
Hanse Towns, Holl. } & Belg.	22,	941,	41,	102,	44,	186,
Prtgl., Spain, and } Gbrltr.	33,	62,	414,	52,	53,	58,
Mlta., Trky., and } Egypt	69,	3,	21,	28,	32,	15,
China	1,	—	—	—	—	—
West Coast of Africa	58,	—	55,	3,	76,	2,
All other Countries....	30,	20,	469,	34,	294,	28,
<i>Totals Imported....</i>	5,363,	4,012,	9,929,	3,885,	6,337,	3,637,
Exported to:—						
France	1,786,	2,210,	4,366,	812,	2,220,	523,
Hanse Towns, Holl. } & Belg.	31,	116,	124,	2,169,	219,	1,941,
Prtgl., Spain, and } Gbrltr.	—	—	303,	—	347,	—
	1,817,	2,326,	4,793,	2,981,	2,786,	2,464,
Ind. and China (viâ } Egypt)	554,	1,743,	583,	522,	16,	446,
Danish West Indies	—	—	—	—	—	—
United States	606,	—	17,	—	49,	—
South Africa	—	—	63,	—	—	—
Mauritius	—	—	—	—	—	—
Brazil	420,	—	573,	24,	18,	46,
All other Countries....	526,	995,	140,	106,	351,	79,
<i>Totals Exported....</i>	3,923,	5,064,	6,169,	3,633,	3,220,	3,035,
Excess of Imports	1,440,	—	3,760,	252,	3,117,	602,
„ Exports	—	1,052,	—	—	—	—

REVENUE.—(UNITED KINGDOM.)—30TH JUNE, 1869-68-67-66.

Net Produce in YEARS and QUARTERS ended 30th JUNE, 1869-68-67-66.

[000's omitted.]

QUARTERS, ended 30th June.	1869.	1868.	1869.		Corresponding Quarters.	
			Less.	More.	1867.	1866.
	£	£	£	£	£	£
Customs	5,515,	5,453,	—	62,	5,499,	5,271,
Excise	4,971,	4,857,	—	114,	5,028,	5,144,
Stamps	2,486,	2,372,	—	114,	2,547,	2,483,
Taxes	1,430,	1,476,	46,	—	1,506,	1,478,
Post Office	1,120,	1,120,	—	—	1,150,	1,070,
Property Tax	15,522,	15,278,	46,	290,	15,730,	15,446,
	2,489,	2,269,	—	220,	1,577,	1,597,
Crown Lands	18,011,	17,547,	46,	510,	17,307,	17,043,
	74,	73,	—	1,	72,	71,
Miscellaneous	762,	664,	—	98,	402,	350,
Totals	18,847,	18,284,	46,	609,	17,781,	17,464,
			NET INCR. £563,041			

YEARS, ended 30th June.	1869.	1868.	1869.		Corresponding Years.	
			Less.	More.	1867.	1866.
	£	£	£	£	£	£
Customs	22,486,	22,604,	118,	—	22,531,	21,369,
Excise	20,576,	19,991,	—	585,	20,554,	20,067,
Stamps	9,332,	9,366,	34,	—	9,484,	9,553,
Taxes	3,448,	3,479,	31,	—	3,496,	3,421,
Post Office	4,660,	4,600,	—	60,	4,550,	4,350,
Property Tax	60,502,	60,040,	183,	645,	60,615,	58,760,
	8,838,	6,869,	—	1,969,	5,680,	5,777,
Crown Lands	69,340,	66,909,	183,	2,614,	66,295,	64,537,
	361,	346,	—	15,	331,	321,
Miscellaneous	3,454,	2,847,	—	607,	3,127,	2,868,
Totals	73,155,	70,102,	183,	3,236,	69,753,	67,726,
			NET INCR. £3,052,735			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 30TH JUNE, 1869:—

An Account showing the REVENUE and other RECEIPTS of the QUARTER ended 30th June, 1869; the ISSUES out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the 30th June, 1869, in respect of such Charges.

Received:—

	£
Income received, as shown in Account I	18,847,044
Amount received in repayment of Advances for Public Works, &c. ...	441,138
" for New Courts of Justice	8,000
Saving on previous Charge for Diplomatic Services	302
	<hr/>
	£19,296,484
Excess of the Sums charged on the Consolidated Fund on the 30th June, 1869, payable in September Quarter, 1869, above the Balance, in the Exchequer at that date, viz.:—	
Excess of Charge in Great Britain	£3,414,529
Surplus over Charge in Ireland	834,491
Net deficiency	<hr/>
	*2,580,038
*Charge on the 30th June, 1869	7,979,704
Paid out of Growing Produce in June Quarter, 1869	663,082
	<hr/>
Portion of the Charge payable in September Quarter, 1869...	7,316,662
To meet which there was in the Exchequer on the 30th } June, 1869	4,736,584
	<hr/>
Net Deficiency as above	2,580,038
	<hr/>
	£21,876,522

Paid:—

	£
Net Deficiency of the Balance in the Exchequer to meet the Charge } on the 31st March, 1869, as per last account	1,845,918
Amount issued to repay Advances in Aid of Ways and Means	1,000,000
Amount applied out of the Income to <i>Supply Services</i> (including } 1,000,000 <i>l.</i> on Account of the Expedition to Abyssinia)	11,043,900
Amount advanced for New Courts of Justice	7,000
Charge of the <i>Consolidated Fund</i> on the 30th June, 1869, viz.:—	
Interest of the Permanent Debt	£6,091,873
Terminable Annuities	929,048
Interest of Exchequer Bonds }	11,375
" " Bills	43,071
" Advances in Aid of Ways and Means	2,433
Principal of Exchequer Bills	123,500
The Civil List	101,956
Other Charges on Consolidated Fund	305,887
Advances for Public Works, &c.	370,561
Paid out of Growing Produce in June Quarter, } 1869	£663,082
Payable in September Quarter, 1869	7,316,622
	<hr/>
	7,979,704
	<hr/>
	£21,876,522

**BRITISH CORN.—*Gazette Average Prices (ENGLAND AND WALES),
Second Quarter of 1869.***

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on a Saturday, 1869.		Weekly Average. (Per Impl. Quarter.)					
		Wheat.		Barley.		Oats.	
		s.	d.	s.	d.	s.	d.
April	3	46	4	44	1	26	9
"	10	47	—	44	6	26	5
"	17	46	8	44	6	27	7
"	24	45	5	43	6	26	9
<i>Average for April</i>		46	4	44	1	26	10
May	1	44	9	42	2	26	11
"	8	44	4	40	2	26	9
"	15	44	6	40	1	26	11
"	22	45	2	37	7	27	1
"	29	45	2	37	3	27	—
<i>Average for May</i>		44	9	39	5	26	11
June	5	45	5	37	5	26	2
"	12	46	—	37	1	26	6
"	19	46	2	32	2	27	8
"	26	46	4	32	7	29	—
<i>Average for June</i>		45	11	34	9	27	4
<i>Average for the quarter</i>		45	7	39	5	27	—

RAILWAYS.—PRICES, April—June;—and TRAFFIC, January—June, 1869.

[Abstract from "Herepath's Journal" and the "Times."]

Total Capital Ex- pended Mins.	Railway.	For the (£100). Price on			Miles Open.		Total Traffic. First 26 Weeks. (000's omitted.)		Traffic pr. Mile pr. Wk. 26 Weeks.		Dividends per Cent. for Half Years.					
		1st June.	1st May.	1st April.	'69.	'68.	'69.	'68.	'69.	'68.	31 Dec. '68.	30 Jun. '68.	31 Dec. '67.			
£					No.	No.	£	£	£	£	s.	d.	s.	d.	s.	d.
57,5	Lond. & N. Westn.	117 ³ / ₄	116	116	1,424	1,408	3,138,	3,027,	85	83	67	6	52	6	67	6
49,7	Great Western	49 ¹ / ₂	49 ¹ / ₂	50	1,386	1,369	2,006,	1,956,	56	55	15	—	12	6	15	—
20,8	„ Northern...	108	107	109	487	487	994,	983,	79	78	75	—	42	6	75	—
29,1	„ Eastern	38	38	37 ³ / ₄	746	728	943,	916,	49	49	Nil	Nil	Nil	Nil	Nil	Nil
17,4	Brighton	46	48	49 ¹ / ₄	365	336	567,	562,	60	64	12	6	„	„	„	„
20,1	South-Eastern	76	76	76	346	346	699,	684,	77	76	40	—	22	6	40	—
17,1	„ Western....	90	89	89	521	503	681,	664,	50	50	52	6	40	—	52	6
211,7		75	75	75 ¹ / ₄	5,275	5,177	9,028,	8,792,	66	65	37	6	24	3	35	8
34,0	Midland	116 ¹ / ₄	115	117 ¹ / ₂	778	761	1,604,	1,413,	79	71	57	6	50	—	55	—
23,1	Lanesh. and York.	123 ¹ / ₂	123	123 ¹ / ₂	411	403	1,230,	1,245,	115	118	67	6	67	6	65	—
15,8	Sheffield and Man.	54 ¹ / ₄	56 ¹ / ₄	57 ³ / ₄	251	251	562,	503,	86	77	25	—	Nil	Nil	20	—
40,2	North-Eastern	106	102 ¹ / ₂	103	1,260	1,248	1,903,	1,801,	58	56	60	—	45	—	60	—
113,1		100	99	100 ¹ / ₂	2,700	2,663	5,299,	4,962,	75	71	52	6	40	7	50	—
22,0	Caledonian	77 ¹ / ₂	78 ¹ / ₂	79 ³ / ₄	668	668	981,	922,	56	53	27	6	15	—	25	—
6,2	Gt. S. & Wn. Irld.	97	97	97	420	420	—	—	—	—	45	—	50	—	45	—
353,0	Gen. aver.	84 ¹ / ₂	84	85	9,063	8,928	—	—	—	—	41	11	30	7	40	—

Consols.—Money Prices, 1st June, 93 $\frac{7}{8}$ to 94.—1st May, 93 $\frac{1}{2}$ to $\frac{5}{8}$.—1st April, 92 $\frac{7}{8}$ to 93.

Exchequer Bills.—1st June, 5s. dis. to par.—1st May, 2s. to 7s. pm.—1st April, par to 5s. pm.

BANK OF ENGLAND.—WEEKLY RETURN.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the SECOND QUARTER (April—June) of 1869.

[0,000's omitted.]

1	2	3	4	5	6	7
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.	DATES. (Wednesdays.)	Assets.			Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
Notes Issued.		Government Debt.	Other Securities.	Gold Coin and Bullion.		
£	1869.	£	£	£	£	1868. Per ann.
Mlms.		Mlms.	Mlms.	Mlms.	Mlms.	3 Dec. 3 p.ct.
31,24	April 7 ...	11,02	3,98	16,24	23,98	
30,89	„ 14 ...	11,02	3,98	15,89	23,79	
30,89	„ 21 ...	11,02	3,98	15,89	23,63	1869.
30,83	„ 28 ...	11,02	3,98	15,83	23,49	1 April 4 „
30,51	May 5 ...	11,02	3,98	15,51	24,01	6 May 4½ „
30,39	„ 12 ...	11,02	3,98	15,39	23,62	
30,70	„ 19 ...	11,02	3,98	15,70	23,34	
31,18	„ 26 ...	11,02	3,98	16,18	23,05	
31,66	June 2 ...	11,02	3,98	16,66	23,52	
32,47	„ 9 ...	11,02	3,98	17,47	22,84	10 June 4 „
33,04	„ 16 ...	11,02	3,98	18,04	22,58	
33,41	„ 23 ...	11,02	3,98	18,41	22,68	24 „ 3½ „
33,62	„ 30 ...	11,02	3,98	18,62	23,39	

BANKING DEPARTMENT.

8	9	10	11	12	13	14	15	16	17	18
Liabilities.					DATES. (Wdnsdys.)	Assets.				Totals of Liabili- ties and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
£	£	£	£	£	1869.	£	£	£	£	£
Mlms.	Mlms.	Mlms.	Mlms.	Mlms.		Mlms.	Mlms.	Mlms.	Mlms.	Mlms.
14,55	3,11	4,75	18,80	,48	April 7	14,97	18,48	7,26	,99	41,70
14,55	3,12	4,31	18,11	,48	„ 14	15,02	17,37	7,10	1,08	40,57
14,55	3,13	4,95	17,66	,48	„ 21	15,02	17,36	7,26	1,14	40,78
14,55	3,14	4,97	16,97	,46	„ 28	14,52	17,08	7,34	1,15	40,09
14,55	3,13	5,12	15,93	,45	May 5	14,02	17,58	6,50	1,07	39,18
14,55	3,15	5,68	17,46	,47	„ 12	14,07	19,30	6,77	1,17	41,31
14,55	3,16	4,93	18,00	,46	„ 19	14,07	18,57	7,36	1,11	41,11
14,55	3,17	5,65	17,59	,41	„ 26	14,07	17,97	8,13	1,20	41,37
14,55	3,14	6,06	17,10	,42	June 2	14,09	17,88	8,14	1,16	41,27
14,55	3,13	6,95	17,17	,45	„ 9	14,15	17,33	9,63	1,16	42,27
14,55	3,14	7,14	17,45	,45	„ 16	14,17	16,99	10,46	1,11	42,73
14,55	3,15	7,50	16,97	,45	„ 23	14,24	16,46	10,73	1,18	42,62
14,55	3,18	8,76	19,15	,45	„ 30	14,15	20,55	10,23	1,16	46,09

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND and WALES on Saturday in each Week during the SECOND QUARTER (April—June) of 1869; and in SCOTLAND and IRELAND, at the Three Dates, as under.

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES. <i>Saturday.</i>	<i>London:</i> Cleared in each Week ended <i>Wednesday.*</i>	Private Banks. (Fixed Issues, 4,04).	Joint Stock Banks. (Fixed Issues, 2,74).	TOTAL. (Fixed Issues, 6,78).	Weeks ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 2,75).	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6,35).
1869.	£	£	£	£	1869.	£	£	£	£	£	£
April 3	69,16	2,83	2,45	5,28							
" 10	70,04	2,88	2,49	5,37							
" 17	65,03	2,87	2,48	5,35							
" 24	81,75	2,87	2,46	5,33	April 24	1,76	2,73	4,49	3,49	3,13	6,62
May 1	64,68	2,86	2,47	5,33							
" 8	79,89	2,84	2,47	5,31							
" 15	59,78	2,83	2,43	5,26							
" 22	75,13	2,76	2,37	5,13	May 22	2,01	2,92	4,93	3,59	3,05	6,64
" 29	55,81	2,70	2,31	5,01							
June 5	70,68	2,67	2,27	4,94							
" 12	61,61	2,62	2,23	4,85							
" 19	69,30	2,58	2,21	4,79	June 19	1,88	3,00	4,88	3,39	2,90	6,29

* The Wednesdays *preceding* the Saturdays.

FOREIGN EXCHANGES.—*Quotations as under, LONDON on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on LONDON—with collateral cols.*

1	2	3	4	5	6	7	8	9	10	11	12
DATES.	Paris.				London on Hamburg.	New York.	Calcutta.		Hong Kong.	Syd- ney.	Standard Silver in bars in London. pr. oz.
	London on Paris. 3 m. d.	Bullion as Arbitrated.		Prem. or Dis. on Gold per Mille.			India Council.	At Calcutta on London. 6 m. d.			
		Agnst. Engd.	For Engd.								
1869.		pr. ct.	pr. ct.			pr. ct.	d.	d.	d.	pr. ct.	d.
April 10.	25·40	—	—	par.	13·11½	108	23¼	24¼	53¼	1 pm.	60⅝
„ 24.	„	—	—	„	„	„ ⅜	„ ½	„ ⅕	„ ½	„	„
May 8.	·42½	—	—	„	·13½	109	„ ¼	„ ⅙	54½	„	„ ¾
„ 22.	·50	—	—	„	·13	„ ¾	22¾	23⅓	„	1¼	60
June 12.	·47½	—	—	„	·12¾	„	„ ⅞	„ ⅝	56¼	„	„ ⅛
„ 26.	·42½	—	—	„	„ ¼	„ ⅝	23¼	„ ¾	56	„	„

JOURNAL OF THE STATISTICAL SOCIETY,

DECEMBER, 1869.

INAUGURAL ADDRESS *on the* PROGRESS *and* PRESENT CONDITION
of STATISTICAL INQUIRY, *delivered at the* SOCIETY'S ROOMS,
12, *St. James's Square, London, on* TUESDAY, 16th November,
1869. *By the* PRESIDENT, WILLIAM NEWMARCH, F.R.S.

IN the original prospectus or statement of objects, dated 23rd April, 1834, and signed Henry Hallam, Charles Babbage, Richard Jones, and John Elliott Drinkwater, in pursuance of which the Statistical Society of London was founded, it is stated as follows:—

“ The Society has been established for the purpose of procuring,
“ arranging, and publishing ‘ Facts calculated to illustrate the con-
“ ditions and prospects of Society,’ * * * The whole subject
“ was considered by the Statistical Section of the British Asso-
“ ciation at Cambridge (in August, 1833), as admitting a division
“ into four great classes: (A) *Economical Statistics*, comprehending
“ (1) the Statistics of the natural productions and the agriculture
“ of nations; (2) of manufacture; (3) of commerce and currency;
“ (4) of the distribution of wealth, and all facts relating to wages,
“ profits, &c.—(B) *Political Statistics*, consisting of three subdivi-
“ sions: (1) the facts relating to the elements of political institu-
“ tions, the number of electors, jurors, &c.; (2) Legal Statistics;
“ (3) the statistics of finance and of national expenditure, and of
“ civil and military establishments.—(C) *Medical Statistics*, strictly
“ so called, will require at least two subdivisions, and the great
“ subject of Population, although it might be classed elsewhere, yet
“ touches medical statistics on so many points that it would be
“ placed most conveniently perhaps in this division, and would
“ constitute another subdivision.—(D) *Moral and Intellectual*
“ *Statistics*, which comprehend, (1) the statistics of literature;
“ (2) of education; (3) of religious instruction and ecclesiastical
“ institutions; (4) of crime. Although fourteen subdivisions have
“ now been enumerated, it is probable that more will be
“ required.”

The meaning of this outline will be rendered plainer by the following two passages from the “ Introduction,” dated May,

1838, prefixed to the first volume of the quarterly *Journal* of the Society :—

“ Like other sciences, that of Statistics seeks to deduce from
 “ well established facts certain general principles which interest
 “ and affect mankind : it uses the same instruments of comparison,
 “ calculation, and deduction ; but its peculiarity is that it proceeds
 “ wholly by the accumulation and comparison of facts, and does
 “ not admit of any kind of speculation : it aims, like other sciences,
 “ at truth, and advances *pari passu* with its development.”

And then, in illustration of the applicability of the principle here stated, the following statement is made :

“ The Statist commonly prefers to employ figures and tabular
 “ exhibitions, because facts, particularly when they exist in large
 “ numbers, are most briefly and clearly stated in such forms ; and
 “ because he is not satisfied with giving deductions, which admit of
 “ question, but supplies the materials which each individual may
 “ himself examine and compare. It is not however true, that the
 “ Statist rejects all deductions, or that statistics consists merely of
 “ columns of figures. It is simply required that all conclusions
 “ shall be drawn from well-attested data, and shall admit of
 “ mathematical demonstration.”

We have here very distinctly set out the three fundamental rules, which for thirty-five years have been carefully observed in the proceedings of the Society, and in determining the contents of the thirty-two volumes of its *Journal*, viz.:—

- I. The collection of facts relating to Man in Society.
- II. The verification, arrangement, and exhibition of these facts in their most natural and lucid order.
- III. The exclusion of all speculations and deductions not directly authorised by the evidence so procured.

It has been said, I know, in many quarters, that we are restricted by the conditions of our pursuit to mere columns of figures, and that theories and opinions are wholly beside our objects and purpose. The answer is short and simple, namely, that Statistics in this matter is precisely in the same circumstances as Mechanics or Chemistry ;—that is to say, that in interpreting facts it employs, where needful, the methods of trial and conjecture which are permitted in all sciences of observation.

The Prospectus of 1834 (drawn up, I have reason to believe, by Mr. Hallam), points out, it will be observed, with fitting caution, that “ although fourteen subdivisions of inquiry are enumerated in it, it is probable that more will be required.” More have been required. After a whole generation of active work and energetic discussion, any attempt now to classify and arrange the field of

statistical inquiry would be vastly more elaborate than the four-fold division of Economical, Political, Medical, and Moral Statistics which occupied the minds of our founders in 1834.

At that time no reference could be made to any country but our own, for foreign Governments and Legislatures, with perhaps two or three partial exceptions, had not arrived at even the faintest notion of the desirableness of systematic statistical evidence. During the last twenty-five years this state of things has almost disappeared, and in several foreign States there are now in full activity Statistical Departments, and a vigour of statistical research by independent persons, which almost reduces the United Kingdom to a second place. Speaking for ourselves, however, we may put forward the following enumeration of subjects of inquiry as regards which we have already arrived at results so positive and clear that they have passed by general assent into the order of established scientific truths,—and I so frame the list as to graduate from top to bottom the degree of success attained:—

1. Vital Statistics, including Births, Marriages, Deaths, Diseases, and Epidemics.
2. Census Statistics, including the races, occupations, ages, social condition, and distribution of the people.
3. Statistics of Pauperism, Police, and Crime.
4. Fiscal and Financial Statistics—taxation, funding, Savings Banks, Currency, and Life Assurance.
5. Statistics of Conveyance, including Railways, Steam-vessels, and Public Carriages.
6. Trade Statistics, both as regards foreign and inland commerce and navigation.
7. Statistics of Education, both primary, intermediary, and collegiate.
8. Statistics of the cost and effects of Central and Local Government, including the maintenance of Armed Forces of all kinds.

If I am right in the adjustment of this order of precedence, and I think I am, the results are suggestive.

Under the three first heads of Vital and Census Statistics, and Statistics of Pauperism and Crime, we are in this country at present in advance of all other communities. We have attained to scientific completeness and precision in:—

(1). The extent and variety of the observations made. (2). In their authentic character. (3). In the uniform methods of their collection. (4). In the natural and lucid order of their exhibition. (5). And in the rigid manner in which the deductions are kept close to the facts.

By virtue of this method of investigation—and let me again remind you that it is neither more nor less than the Baconian rule extended from the purely physical to the mixed-mathematical fields of research—we have arrived at certain Ultimate Units in vital statistics; for example, we know as a matter of absolute certainty that, in ordinary years, the rate of mortality in England and Wales is 22·48 per 1,000 per annum of the mean population of the year; that the marriage-rate is 16·92 per 1,000, and the birth-rate 35·34 per 1,000.

By means of at least two Censuses, 1851 and 1861, taken under the advice and supervision of our fellow-members, Dr. Farr and Mr. Hammick, we are put in possession of a series of similar Ultimate Units as regards ages, the proportions of the sexes, the conjugal condition, the occupations and geographical distribution of the people. The periodical Reports also of the Factory and other Commissioners present most valuable evidence relating to different kinds of employments of the working classes.

In like manner, as regards Pauperism, the systematic labours of the Poor Law Board, since its formation, more than thirty years ago, have enabled us to state with precision the ratios, character, origin, and cost of Pauper relief in every part of England and Wales; and of late years the intelligence of our fellow-member, Mr. Purdy, as head of the Statistical Office of the Poor Law Department, have led to many improvements and extensions of the information collected and published.

We also, I think, justly claim superiority over any other country as respects the fourth division, viz., Fiscal and Financial Statistics, including Taxation, Funding, Savings Banks, Currency, and Life Insurance. The successful application by our deceased Vice-President, Thomas Tooke, of the statistical method in the proof and development of his doctrines regarding the causes which determine the course of prices, the fluctuations of the bank note circulation, and the state of credit is, beyond doubt, one of the achievements of which we have most reason to be proud. Fifty years ago, when Mr. Tooke published the early volumes of the “History of Prices,” statistical materials were scanty and of difficult access. But the enlarged and accumulated evidence which every year supplies has only confirmed the soundness of his conclusions; and at this very moment, the Report presented by the Commission, appointed nearly five years ago by the French Government to investigate fully the range of questions relating to banking and credit institutions, announces results which are identical with those which will ever be associated with Mr. Tooke’s name and writings.*

* “Enquête sur les Principes et les faits généraux qui régissent la Circulation monétaire et fiduciaire.” Paris. Ministère des Finances. Evidence and Report

We have of late years amassed immense materials relating to the fiscal financial policy and changes of this and other countries. The public discussions on the subject of the Income Tax have contributed largely to this result. Within the last two years the publications of Mr. Dudley Baxter on the taxation of the United Kingdom have been marked by originality and great command of statistical data. Still I do not think that there has recently appeared in England any book on taxation so thoughtful and so well informed from so many sources as the works of the eminent French economist and statist, M. de Parieu.*

England is the native land of Life Insurance, and principally by means of our friends and co-occupants of these rooms, the Institute of Actuaries, the pre-eminence of this island as the foremost authority on the theory and practice of Life Insurance, has been honorably maintained.

Under the fifth head of Conveyance, especially Railway Conveyance, we have amassed abundant materials, but almost the last scientific analysis and discussion of the facts was Dr. Lardner's book which appeared more than twenty years ago and is of course now entirely out of date. In saying this I am not insensible of the exhaustive nature of the discussions which have taken place at intervals on particular points of Railway Economy, and especially of the evidence collected and considered by the Commission under the Duke of Devonshire, which sat in 1865-67.

The sixth division refers to the Statistics of Trade and Navigation, Inland and Foreign. Latterly it has become the fashion to decry the periodical returns issued by the Statistical Office of the Board of Trade, and it seems to me somewhat prematurely and without sufficient knowledge of the nature of the case. I do not say that our periodical returns of the course of the Foreign Trade of the country are not susceptible of large improvement; but I do say, most emphatically, that there is no single branch of our Public Statistics in which more considerable improvement, both in form and compass has taken place during the last twenty-five or twenty years. The incessant alterations and reductions of our tariff and the consequent changes in the revenue offices, to say nothing of the constant changes in the course and direction of commerce itself, have entailed great difficulties in the maintenance of uniform statistical records. There have been and are considerable defects in the detailed modes of collecting and verifying the

7 volumes. 1865-69. The Commission examined orally, and received written replies from more than a hundred individuals, Corporations, and Chambers of Commerce, in France and other countries.

* "*Traité des Impôts considérés sous le rapport Historique, Economique et Politique en France, et à l'Etranger;*" par Esquiros de Parieu. Paris. 1867.

original entries which form the basis of all subsequent totals, and until these defects are overcome there will be contradictions and discrepancies. But the frame-work of our system is entitled to high commendation, and should not be disturbed except after full and public enquiry. The Official Trade Statistics of the country are to be improved only as all other things are improved—not by abolishing or enfeebling the machinery, but by accelerating its action and enlarging its power. Let us however do full justice to the growing value of the periodical reports on the trade and industry of foreign countries furnished by British Consuls and Secretaries of Legation serving abroad. These reports have now been published for eight or nine years and the collection includes not a few Papers of the very highest merit and excellence. It would greatly add to the value of the series if the two sets of reports could be combined and could appear regularly on the first of each month.

Let us also do justice to the admirable series of returns prepared under the care of Mr. Donnelly, the Registrar-General of Ireland, of the Agricultural and Live Stock produce of that country. The system of a highly instructed Police Force which prevails in Ireland, enables the Executive there, to collect information quite beyond our reach in England.

In the matter of Education (seventh division), we have, and we have not, reason to congratulate ourselves on the issue of many efforts to ascertain the two facts of (1), the extent to which primary education is being applied to children of the working and poorer classes; and (2), the number of such children who are still wholly or mainly left uneducated. The contention of rival parties, sects, societies, and leagues has most effectually obscured the subject, and beyond the happy certainty that in one form or another popular education of some kind, becomes more general every year, we are really unable to give the precise statistics of the fact, whether for the country as a whole or for any particular parts of it. There are strong symptoms however of the speedy arrival of a different state of things.

Facts relating to the cost and effect of the Central and Local Government of a country, and to the cost and effect of the maintenance of armed forces, have, during the last ten or twelve years become a subject of prominent interest in this and other countries. The old vague violent declamation against placemen and expenditure has lost its attractiveness, and specifically, because it was vague and devoid of accuracy and instances. But the pressure of taxation, and the obvious burdens, both fiscal and economical, entailed by conscriptions and standing armies, have in a wholesome manner sharpened curiosity on every topic connected with the cost

of Government and military organisation. This is the topic which occupies the popular branches of the Legislature in all the Continental States—Austria, Hungary, Prussia, Holland, the smaller German kingdoms, and even in France, with the earliest restoration there of parliamentary control. With ourselves the inquiry is only beginning. The Military and Naval Estimates are still obscure and difficult. The cost of Colonial defence; the cost in men and treasure of the Indian Army of occupation; the expense of Courts of Justice, and of the Judicial system they represent; the cost and efficiency in the changed circumstances of the country of the higher offices of administration—are all subjects on which we only are beginning to collect facts; and it may be safely added, are all subjects not to be safely treated until the facts have been collected.

I have now stated the branches of inquiry in which in this country we have made decisive and gratifying progress during the last thirty-five years. It is plain, however, that as regards the last half of the eight divisions I have set forth, we cannot regard our progress hitherto as more than the foundation of scientific knowledge to be arrived at hereafter in a complete form.

Let me now state what appear to me to be the fields of statistical research which in this country most require early attention. They are the following:—

1. The annual consumption per head among different classes, and by the nation, as a whole, of the chief articles of food—corn, butchers' meat, tea, coffee, sugar, tobacco, wine, spirits, and beer.

2. The annual production in agriculture, minerals, metals, ships, and manufactures.

3. The comparative wages, house-rent, and cost of living in different parts of the country.

4. The total annual income and earnings and the total annual accumulations of different classes, and of the country, as a whole.

5. The relative taxation of different classes in this country, as compared with the same classes in those foreign countries, the competition of which England has to understand and meet—carefully attending in the inquiry to the comparative merits of Direct and Indirect taxation.

6. The financial and economical cost and burdens entailed by extensive warlike Armaments.

7. Periodical statistics of Public Hospitals in the Metropolis and the larger towns, with a view to a comparison of the efficiency and cost of the relief afforded in each.

8. Periodical returns of the income and operations of Charitable Trusts and Endowments, for relief and education.

9. A statistical ascertainment of the numerical strength of the different Religious churches and sects.

10. Statistical Evidence of the cost to the community in sickness, excessive mortality, and poor-rate expenditure of defective dwellings, and sanitary regulations.

11. Statistical Evidence of the gain to the community of instruction in popular schools in the rudiments of political economy, in the commoner industrial arts, and in military exercises.

12. Statistical Evidence of the consequences in this country of the Emigration from it.

13. Investigations relative to the advantages and cost to this country of the occupation of India.

14. An investigation on grounds of fact of the effect of Commercial Treaties, especially of the French Treaty of 1860.

15. A similar investigation of the consequences produced in the United States by the rigid system of protective Tariffs.

16. And by the protracted suspension of specie payments.

17. Statistical inquiries relative to the effects produced in Europe on commerce, accumulation, invention, prices, and the rate of interest, by the Gold Discoveries in California and Australia.

18. Investigations of the mathematics and logic of Statistical Evidence; that is to say, the true construction and use of Averages, the deduction of probabilities, the exclusion of superfluous integers, and the discovery of the laws of such social phenomena as can only be exhibited by a numerical notation.

These eighteen groups of subjects extend over a large surface, and the lapse of years and the intelligence and zeal of a phalanx of workers will be required to master them. But the work will be done sooner or later; and all the sooner, after we have once for all satisfied ourselves of its necessity.

Let us consider more in detail some of the topics proposed.

First, as regards the accurate statistical determination of the Average Consumption of the chief articles of food among different classes of the population,—corn, butchers' meat, and colonial produce. At present, we cannot speak with any approach to accuracy of the extent and cost of the most vital of all requirements, viz., the food of the people. We are perpetually guessing at the probable consumption of wheat and other grains per head—the same of potatoes and butchers' meat, and colonial produce; and until, by a series of extensive and well-devised observations of rigid statistical facts we arrive at results entitled to credence, we shall continue to speculate and reason in the dark. Sir George Lewis did make an effort while he was Chancellor of the Exchequer to ascertain the average consumption of Tea and Sugar; but the effect was partial

only, and can only be referred to as indicating the wishes of a statesman eminent for his sagacity and love of truth.

The collection each year of the statistics of the Acreage under the different kinds of crops, and of the number of Horses, Cattle, and Sheep, has removed one of the most serious defects in our public records. Mr. Hunt, of the Geological Survey, has brought to great perfection his means of ascertaining annually the produce of minerals and metals. The Factory Inspectors furnish in their half-yearly reports much valuable evidence on the condition of the Cotton, Woollen, Worsted, and Hosiery Trades; and the extension of the Workshops' Act to branches of manufacture not hitherto included, *e.g.*, Hardware, Earthenware, Engine works, and some others, may be expected to produce similar periodical reports. It is impossible, in speaking on this topic, to omit reference to the admirable series of works by M. de Lavergne, on the comparative productiveness of French and English arable and pasture farming.

Under the third, fourth, and fifth divisions, embracing the subjects of Wages, Cost of Living, Income, Savings and Taxation of this and other countries, very solid progress has been made during the last ten or twelve years. The extensive and most laborious collections of M. Le Play, who, as Commissaire-General for France, at the Exhibitions of 1855, 1862, and 1867, had the best means of procuring information,* are, probably, the most important. But our own fellow-members, Professor Leoni Levi and Mr. Dudley Baxter,† have published three works which will form epochs in the history of all investigations relative to Wages, Income, and Taxation in this country. Mr. David Wells, the Special Commissioner of Revenue in the United States, in Reports to which I shall have again to refer, has treated of the same subjects as regards North America, with a freedom, impartiality, and precision, far in advance of any previous example among his countrymen. But all these investigations have only shown more clearly than before that while on one hand, in order to arrive at absolutely positive results, fuller and more accurate details are required, so on the other, a more thorough discussion of the general principles of the investigation is quite as necessary.‡

* M. Le Play: "*Les Ouvriers Européens*;" and a second work "*Les Ouvriers des Deux Mondes*" (Paris). See also M. Le Play's "*La Réforme Sociale en France déduite de l'Observation comparée des Peuples Européens*." Paris. 2 vols.

† Leoni Levi: "Wages and Earnings of the Working Classes." London. 1867. Dudley Baxter: "Taxation of the United Kingdom," 1869; and "National Income of the United Kingdom," 1868.

‡ The following extract from the "Pall Mall Gazette," of 27th July, 1869, very properly draws attention to sources of error and confusion found in official papers, ignorantly and imperfectly prepared:—

"The Commissioners of Inland Revenue, in referring to a 'Return printed by the House of Commons in June, 1869,' demonstrate how easily the most erroneous

The sixth division suggests the collection of statistical evidence of the cost and burden entailed by large Military Establishments, and I honestly believe that no more important subject can at present attract the attention of statisticians. The real mischief and incubus of military armaments will never be understood by legislatures or subjects until their effects are exhibited in hard facts and in naked detail. M. Legoyt, whose name is among the most eminent of our fellow-labourers on the Continent has just inserted in the "Journal of the Statistical Society of Paris," of which he is Honorary Secretary, a paper on this subject, which I trust will act as a signal in other countries. From this paper I quote the following admirable outline of the whole argument:—

"In 1869, according to estimates which we consider under rather than over the fact, Europe keeps in time of peace an effective army of 3,815,847 men, and inscribes upon its budget a sum of three and a half milliards (140,000,000*l.*), or 32 per cent. of the whole of her expenditure, to meet the cost of this colossal army. Now, let us suppose for a moment that, as the result of an understanding between the Powers concerned, a disarmament to the extent of one-half was carried into effect. Forthwith, 1,907,924 men, of from 20 to 35 years old, the very pick of the population of that age, are restored to peaceful labour, and a saving of

conclusions may be deduced from it. This return, they observe, purports to show the *proportion of taxation to wealth* in England, and the similar ratio in Ireland; the sum assessed to the *income tax* being taken as the measure of wealth in each kingdom. The result reached on the face of the return is that in England for every 100*l.* of income tax only 17*l.* 14*s.* is raised by taxation, while the proportion in Ireland on the corresponding standard is 29*l.* 10*s.* 7½*d.* Apparently, the latter country surrenders 12 per cent. more of its wealth to the Chancellor of the Exchequer than England. 'A more erroneous conclusion,' the Commissioners assert, 'could scarcely be arrived at.' For these reasons:—1st. The assessment to Schedule A (lands, houses, and real property generally) in England is made upon the full rental, and in Ireland upon the poor-rate assessment—'which we believe is, on the average, at the present time in Ireland at least 20 per cent. below the true value.' 2. The same is true of Schedule B (farmers' profits). 3. On Schedule C (the public funds) a still less valid comparison emerges. The sum assessed in England is 32,500,000*l.*, and in Ireland 1,115,000*l.* These are the dividends payable at the Bank of England and Bank of Ireland respectively. England is debited in addition to the investments of her own holders with those of Scotland, Ireland, and the colonies, and of foreigners in the public funds—to say nothing of the investments of the Irish themselves, among others, in such securities as Indian Stock, Canadian Bonds, French Rentes, Danish, Dutch, Russian, Turkish, and other stock of all foreign Governments. These investments are entirely inscribed on Schedule C of the English returns. 4. Schedule D (profits of trades and professions). The metropolis *de facto* is the great central bank of the banks of the United Kingdom, of many that conduct their business in our colonies and in foreign parts, as well as for numerous public companies scattered over the commercial world. 'The investments of the Irish themselves,' the Commissioners remark, 'in Irish Companies, are assessed to income tax not unfrequently in London, where the head offices of the company are situated.' And 5. Schedule E (salaries of office, &c.), 19,000,000*l.*, salaries and pensions of public servants and of officers of public companies are assessed in England, and but 1,000,000*l.* in Ireland."

1,600,000,000 frs. (64,000,000*l.*) in the budgets of Europe is realised. With this sum Europe might add annually to her present railway system (at the mean cost of 150,000 frs., 6,000*l.* per kilometre) 10,000 kilometres (6,214 miles) of railway; she might complete her system of road communication of every kind in a single year; she might endow in every coun'try and in every parish a primary school. These great improvements once realised, she might, if she determines to maintain the existing amount of taxation, apply the surplus to a progressive reduction of her debt. The annual interest of this debt being now about two and a third milliards (95,000,000*l.*), and being capitalised at an average interest of 4 per cent., representing a capital of 57½ milliards (2,300,000,000*l.*), might (without calculating compound interest) set her free from liabilities in about thirty-six years.

"If, on the other hand, the States in question choose to apply the 1,600,000,000 frs. (64,000,000,000*l.*) thus saved to a reduction of the imposts which now press upon production or consumption, what a relief for the peoples! what a new impulse given to business of all kinds! We have said that 1,907,924 men in the prime of life would be restored to the arts of peace. There would be in this happy fact another efficacious cause of prosperity to Europe. In effect putting the average daily earnings of these 2,000,000 of workmen at no more than 2 frs. each (1*s.* 10*d.*), and on the hypothesis that the wages represent a fifth part of the value produced, this pacific army, then enlisted under the flag of industry, would create a daily value of 20,000,000 frs. (800,000*l.*) and an annual value of 7½ milliards (300,000,000*l.*). This is not all—a considerable amount of capital now employed in the fabrication of articles necessary for the equipment and armament of these 2,000,000 men, would become disposable for, and might be applied to, other branches of national industry incomparably more useful. In a word, the keeping at their firesides of 2,000,000 of young people would have the certain effect of appreciably lowering (for a time at least) the price of manual labour, and so giving a lively impulse to production in all its forms. Setting aside for a moment considerations of economy, we call attention to the advantage which a country gains by cherishing the habit and taste for work in a considerable number of adults whom garrison life now condemns to idleness and to its deadly consequences. We point, moreover, to the love of order, to the public morality, to the maintenance of family ties, which the absence of five and six years from the domestic hearth of these youthful recruits more or less completely violates."

The seventh and eighth heads suggest that periodical returns should be furnished by Hospitals in the metropolis, and large towns, of such a nature as will admit of a comparison of the efficiency and cost of the relief afforded in each; and also that similar returns should be rendered by Charitable Trusts and Endowments. Upon both these points there can scarcely be room for two opinions. The amount of Income from corporate estates and investments, and from public subscriptions, legacies, and gifts accruing to Hospitals in this country is perfectly enormous; and the only effectual check on the just and skilful expenditure of these funds is to be found in a well-devised scheme of comparative returns appearing at frequent intervals. We should then be able to discover where cost was highest and efficiency least. No undue revelations are needed or desired. But the public have the clearest right to be satisfied that the money they set aside for the relief of sickness and misfortune is put to the best possible uses, and in the most economical manner. Precisely the same observations apply in principle to all Charitable Trusts. These trusts are the creature of the law, and the law in

this regard can only be vindicated so far as it secures the best services.

I pass over the question of religious sects, until I come to speak of the approaching Census.

When any reference (division ten) is made to Sanitary Progress and Statistics, it is impossible not to advert in terms of the highest commendation to the periodical reports of the Sanitary Department of the Privy Council, presided over by Mr. Simon. These reports and the special inquiries placed by Mr. Simon in the hands of distinguished members of the medical and other professions are rapidly accumulating a body of evidence of the highest interest and value. The labours of the royal commission on Sanitary Legislation now sitting, will, it may be hoped, assist still further in extending the powers of State Medicine. Excessive poor rates and criminality are in some large percentage the consequences of the disease, premature deaths, and tainted constitutions entailed by defective sanitary conditions. But the labours of Mr. Simon require to be followed up in every possible form, for the evil is one which can be best defeated in detail.

I invite under the fourteenth head a statistical examination of the effect of Commercial Treaties, and especially of the French Treaty of 1860. I have never disguised my regret at the negotiation of that Treaty. It is said that there were overpowering political reasons at the time why we should conciliate the Emperor's Government; and if the Treaty is to be defended wholly as a political expedient, there may perhaps be some reasons in its favour. But economically there can be none, and I have the firmest persuasion that a careful statistical examination of the whole of our foreign trade since 1860 with countries with which we have, and with those with which we have not, commercial treaties, will show conclusively that experience confirms the soundness of those doctrines which teach that the only means for increasing external trade, is for a country to reduce its import duties as rapidly as possible without the smallest reference to the policy or practice of the foreigner, whether he be found in one hemisphere or another. A country does not live by what it sends out, but what it takes in. The exports are only a means of getting the imports. But unfortunately there seems to be a revival of the old fallacy, that the only use of imports is to take away exports. The State can do nothing to encourage imports, but reduce and simplify the tariff, and when that is done, all is done. Solemn devices and suggestions of treaties are not only idle, but mischievous, because they subject our internal policy to the authorised criticism of foreign countries, and may lead to dangerous disputes and quarrels. If the state of our revenue will permit us to reduce or abolish the duties on French

brandies, wines, and cottons, we ought to do so for our own sakes. The goods will then come;—the French producer will take care that he gets paid for them, and if there were a thousand treaties in force, nothing different could happen or be desired. This is the real Reciprocity, and there is not and cannot be **any** other. It is a reciprocity of mutual and natural wants founded on cheapness, quality, and convenience, and these are the only conditions on which wholesome and profitable commerce can be carried on. The ordinary idea of reciprocity is, that two nations should maintain an endless diplomatic palaver to settle what articles A shall sell to B, provided B sells certain other articles to A. The history of all commerce is a narrative of the laughable or lamentable failures of all such attempts to teach mankind to make their own bargains and attend to their own business.

The two topics which occur next (divisions fifteen and sixteen) relate to the effects produced in the United States by the Suspension of specie payments, and the high Protective tariff. We have become familiar with the usual newspaper paragraphs, stating that gold in New York stands at 133 or 137, or some other figure, and we hear now and then of different branches of trade—ship-building, for example—having been wholly banished from the territories of the Union by the operation of protective tariffs and other similar legislation. It is said, for example, that so great is the difference in the price and quality of wearing apparel between free trade Montreal and protectionist New York, that as a matter of calculation, it is a saving of money for a person requiring a new suit to travel into Canada and return to New York with the articles upon him. This probably may be a statement not free from the exaggeration of Yankee humour. It is certain, however, that among the most instructive phenomena of the present time are the disturbing influences produced in North America by the depreciated paper money. These influences are mischievous and irritating beyond conception; and they produce their worst consequences among the poorer and working classes. They far exceed in violence any corresponding evils which prevailed in this country during the suspension of cash payments from 1797 to 1819. It is very desirable both in the interests of science and sound policy that they should be studied and exhibited in detail.

And, while mentioning that wish, I may add here, that at such intervals of leisure as a daily business will permit, I have not forgotten those researches on the Circulation of Bills of Exchange, the early result of which appeared in our *Journal* eighteen years ago, and the further results in the “History of Prices,” published in 1857. I am sanguine of being able at no distant date, to lay

before the Society important extensions and additions to the work already done.

The subject next on the list (division seventeen) has reference to an analogous inquiry—the effects produced by the Gold discoveries which began in 1848. It is in the recollection of several of the Fellows, that in the early years of these discoveries I was led to pay much attention to the facts connected with them, and that I arrived at opinions which at that time were highly heretical. I held, for example, that the effect of the discoveries would not be, as was then apprehended, to produce a permanent and serious fall in the rate of Interest, but would, on the contrary, certainly tend to raise it; and I suppose that the course of events has pretty well justified that prediction. I also held that the effect of the new supplies would not be to augment general prices, except in some comparatively partial degree; and this also has become a conclusion at the present time far more orthodox than otherwise. I held also that the commerce of the world, and the progress of invention and discovery, could derive nothing but benefit and stimulus from the enlarged annual supplies of the precious metals—that, in point of fact, the real danger was that these supplies would be too little instead of too much. The following passage from the “History of Prices” (vol. vi, p. 235), published early in 1857, will convey in general terms the groundwork of the reasoning:—

“Set in motion and sustained by the production year by year of large quantities of new gold, there is at work a vast and increasing number of causes, all conducing to augment the real wealth and resources of the world—all conducing to stimulate and foster trade, enterprise, discovery, and production—and therefore all conducing with greater and greater force to neutralise by extension of the surface to be covered, and by multiplying indefinitely the number and magnitude of the dealings to be carried on, the *à priori* tendency of the increase of metallic money to raise prices by mere force of enlarged volume.”

The subject is still among the most important and interesting which can attract statistical inquirers. In Australia, California, and latterly in New Zealand, populous communities are growing up, sustained in the largest degree by the application of rude labour to the business of gold-digging and quartz-crushing; and the exchange and distribution of the gold so produced among the nations of the world, reduces to the test of facts some of the most subtle as well as some of the most common doctrines of political economy.

The literature of the subject has become extensive. M. Chevalier's well-known work “*La Monnaie*,” is still a leading authority,

and among the latest and best is a book by Mr. Blake, the Commissioner for California, at the Paris Exhibition of 1867.* There is also a very useful and comprehensive pamphlet by Dr. A. Soetbeer, of Hamburgh.† A series of articles by M. Bonnet have appeared during the last two years in the "*Revue des deux Mondes*," on the effects of the gold discoveries, urging views very similar to those I have quoted from the "*History of Prices*."

The last subject (division eighteen) in the list, relates to the mathematics and logic of Statistics, and therefore, as many will think, to the most fundamental enquiry with which we can be occupied. Dr. Guy, so long honoured and esteemed as one of our Secretaries, has given much attention to this subject, and papers contributed by him occur in the *Journal*. This abstract portion of the enquiries we cultivate is still, however, in the first stages of growth. It is certain that by means of the averages, and variations of increase and decrease, presented by large masses of figures representing social phenomena which occur within longer or shorter intervals of time and within defined limits, it is possible to arrive at conclusions which so far resemble the law of the several cases that they justify the enunciation of probabilities and predictions. In Vital Statistics we have established a long series of such ultimate conclusions, or Ultimate Statistical Units, as I prefer to call them. What has been done in Vital Statistics, will, in progress of time, be achieved in other branches of inquiry. But there is a preliminary stage to go through, and that is the improvement of methods and notation.

The Registrar-General's office is able to speak with confidence on all the questions which are referred to it, because the record of its observations has been successfully reduced to a rigidly scientific and uniform method and notation. The Tables from the least to the greatest are constructed on the same plan, classified in the same order, and strictly limited to the kind and number of facts which have been ascertained to be sufficient. Superfluous details and superfluous integers are avoided as positive hindrances to the general reasonings alone admissible. We have in this example a lesson of the kind of correction very largely required in every branch of statistics. We waste labour and confuse the subject by running into useless and obstructive fractions. It is, for instance, a very common thing to see statistical tables which exhibit millions of pounds sterling giving not only the last pound, but also the shillings, pence, and

* "*The Production of the Precious Metals, or Statistical Notice of the principal Gold and Silver producing regions of the World*;" by Wm. R. Blake. New York. 1869. Putnam, sen.

† "*Graphische Darstellungen in bezug auf Werthrelatione der Edelmetalle*." Dr. A. Soetbeer. Hamburg. 1869.

farthings. If, of course, the object is to arrive at an exact statement of money due from one person to another, this minute accuracy is indispensable, but where the purpose is a general one, and aims at no more than the exhibition of the larger variations, it is obvious that the tables should be limited to the really important amounts. The omission of superfluous figures, also has the great advantage of simplifying all tabular compilations and so economising labour and cost.

We must cultivate an increasing appreciation of this powerful instrument of systematic and continuous tabular record, and we must be constantly loyal to the principle which lays at the foundation of all our labours, viz., to seek opinions in the facts, and not seek facts to suit opinions:—or, what is the same thing, and the better mode of stating it, we must observe and reason on social phenomena precisely as we observe and reason on physical phenomena. The human mind is only susceptible of one method of accurate investigation, and the world is full of fallacies and confusions because blind traditions and imperfect education have taught that there are almost as many processes of reasoning and evidence as there are subjects to be understood.

While speaking on this subject, I may illustrate the force and value of this method of variations and averages as applied to continuous statistical records, by referring to a statement made to me by Dr. Berg, the Chief of the Statistical Bureau at Stockholm, when I met him lately at the Hague. In Sweden, as is well known, there exists a singularly complete series of parish registers, commencing in the sixteenth century, or earlier. It is known also that the Swedish population has been but little modified or disturbed by emigration or immigration. Dr. Berg has been led of late years to examine and tabulate abstracts of these registers, and he has observed the following remarkable result:—Taking periods or years of national privation, such as famine, war, or pestilence, imposing severe suffering on the people, and consequent excessive mortality, he finds that after the lapse of about two generations, say seventy years or more, there is, for a period of some length, a positive falling off in the increase of population, as determined by births and deaths, which had prevailed before the arrival of this (say) seventieth year. In other words, supposing Dr. Berg's present views to be confirmed by further investigation, it will appear that seasons of exceptional calamity and privation reassert their repressive influence on population at the commencement of the third succeeding generation.

It is just possible, and I will make the suggestion for the consideration of those better able than myself to verify it, that this hypothesis of Dr. Berg may, if verified, assist us in explaining the undoubted rapid increase of the English population between 1790

and 1811, an increase far exceeding that of the early part of the eighteenth century, for as we know it was contended by many acute observers living at that time, that the population of England under Anne and George I did not increase at all, but the contrary. It is undoubtedly true that as a consequence of the unusual and great plenty of the wheat harvests during the fifty years after the Peace of Utrecht (1711), a marked improvement took place in the food of the poorer classes; and it may, perhaps, be found that the full force of that better condition began to assert itself at the end of the seventy years' term which Dr. Berg thinks he has discovered in the Swedish tables.

I said just now that I reserved the subject of the ascertainment statistically of the numerical strength in the United Kingdom of the different Religious Sects till I came to speak of the approaching Census to be taken in March, 1871.

As on former occasions the Council have appointed a Census Committee to whom may be referred questions and suggestions relating to the national enumeration now so near at hand. It is not possible, I imagine, that any material departures will appear to be advisable from the very complete and successful achievements of 1851 and 1861. Two things indeed are manifestly plain, viz., 1st, that with a view to a continuous record on the same bases, novelties of procedure are positively pernicious; and 2nd, having regard to cost, expedition, and accuracy, there cannot be any important addition to the number of questions to be asked and particulars to be collected.

But upon one point there will, I trust, be an unanimity and a force of public opinion which will be decisive. I mean, the introduction of such inquiries into the Census paper as will ascertain the numerical force of the various churches and sects in this country. In 1851 some approach was made to such a result by attempts to estimate or enumerate the attendance at places of worship on a particular Sunday; and in spite of the luminous and impartial discussion of the figures so obtained by our fellow-member, Mr. Horace Mann, we all recollect the outburst of temper and recrimination which burst in more or less violence from almost every one of the religious bodies in the country. There was in each case a stout repudiation of the figures, as being far below what they ought to be, and the authorities of the religious world agreed only in one point, viz.: that every particular sect had been under-represented to the advantage more or less unfair of every other. I pass over the amusing stories which were current of adroit contrivances in certain cases for increasing the attendance on the Census Sunday by services of special interest including, it was alleged, and instances were named, the distribution of tea and cake.

In 1861, Sir George Lewis, who had charge of the Census Bill, endeavoured to maintain a clause which directed the insertion of questions in the Schedule to be left at each house asking for a statement of the religious sect, if any, to which the occupiers belonged. But he was compelled, after much resistance on his part, to abandon it. The non-conformists alleged that many persons would not answer the question at all, and that all such neutral cases would be claimed as belonging to the Established Church, to the manifest injury of parties who dissented from it. The Established Church on the other hand, were afraid that the number of these neutral cases would be so great in the poorer quarters of the larger towns and manufacturing districts as to show very forcibly that the Church of England was only in a very partial degree the poor man's Church. The end has been that the United Kingdom is almost alone among civilised States in being wholly unable to give any accurate statement of the numerical force of the religious confessions prevailing among its population. The result is lamentable and disgraceful in many ways. In the first place, the omitted facts are most material for many purposes of legislation especially as regards education. In the second place, it is humiliating that the religious parties should be unwilling to have the whole truth ascertained whatever it may be. Suppose it to be true, for example that a very large percentage of the poorer population in towns should return themselves as belonging to no sect whatever, or as being secularists or Mormons; surely it is better for the religious authorities to know precisely in what force and in what places these views prevail, than to be left to vague speculations and guesses.

We have therefore, by the aid of public opinion, again to urge Parliament to authorise the Census Commissioners for 1871, to insert such questions in the Householders' Schedule as will accomplish a Census of religious Sects.

The Seventh Session of the International Statistical Congress was held at the Hague, on the invitation of the Dutch Government, in September last; and of this meeting, Mr. Samuel Brown, who was one of my colleagues in the representation of the Society, will give a more particular account. It is due, however, to M. Baumhauer and the organising Committee that I should express the acknowledgements of the Society for the cordiality and judgment displayed in all the arrangements for the reception of its Congress; and it is a matter of duty to add, that every member of the Congress carried away from the Hague a vivid impression of the intelligent and dignified courtesy extended to them by the Queen of Holland. The Congress has now held its meetings in all the

more important European capitals—Brussels, Paris, Vienna, London, Berlin, Florence, the Hague—and in 1871 most probably at Petersburg, the choice lying apparently between that capital, Madrid, and Pesth. In many respects it is impossible to overstate the beneficial results which have flowed from the discussions and labours of the Congress. In this country, in consequence of an earlier attention to statistical inquiries, to the purely parliamentary nature of our administration, and more than all, to the important influence of independent research as represented by this Society, the direct effect of the recommendations of the Congress has been far less than in the continental States, where the entire subject is in the hands of Government Departments. But the growing attendance at each meeting of the Congress, both of official and non-official persons, the more systematic and practical nature of the business brought before the Sections, and the great desire manifested by different countries to be selected as the place of meeting, are all undeniable evidence that advantages solid and practical have flowed from the proceedings.

To the younger countries in which parliamentary government is becoming developed, the value of the Congress is very great. It furnishes them in the best form with the results of statistical organisation in the more advanced States, and hence it has happened that Italy, Hungary, Roumania, Spain, Austria, Greece, Russia, Finland, and even Turkey and Egypt—countries young comparatively in the modern modes of administration, have made extraordinary progress in the organisation of Statistical systems, which have already enabled them to deal in the most confident manner with questions relating to their material resources.

Among the best reports presented at the Hague were those from the younger countries, especially Hungary, Roumania, and Finland. The report from Hungary, by Mr. Charles Keleti,* is a document of considerable merit, and indicates the very rapid progress already made in collecting accurate data from a country till quite recently unsettled. The report from Roumania was of the same character, and the Memoir by M. Ignatius,† on the population of Finland, is a model of scientific arrangement and precision.

Hitherto the official language of the Congress has been French, and German has been also allowed. But the time has surely come for admitting English as one of the languages on the occasion of these meetings, and for the following reasons. English is the language of the United Kingdom, of Australia, India, the Cape,

* “Statistique Officielle de la Hongrie: rapport présenté au VII Congrès International de Statistique, à La Haye en 1869.” Par Charles Keleti, Chef de la Section de Statistique à Pesth.

† “Renseignements sur la Population de Finlande,” par E. C. F. Ignatius, Chef de Bureau, Helsingfors, 1869.

and North America—all regions contributing year by year more largely to statistical research and experience. English is very generally understood in Germany, Russia, Holland, Hamburg, Denmark, and Sweden. These considerations are so powerful that I trust, whoever may be the occupant of this Chair on the occasion of the next Congress, he will be instructed by the Society to apply officially for the just recognition of the English tongue in the proceedings.

I would also suggest here, as one of the subjects to be investigated at the next Congress, the settlement in each country of the best Statistical Tests for ascertaining at short intervals its prosperous or adverse condition. A chief object of all statistical evidence is to enable us to form a judgment, whether at any given time the condition of the inhabitants of a country as indicated by mortality, sickness, food, clothing, wages, pauperism, agriculture, commerce, revenue, savings, and domestic and foreign enterprise, is favourable or the reverse. In every country the predominant tests will vary. In England we depend largely on manufactures and foreign trade; in France, the greater dependence is on agriculture and the vintage; in Russia in still ruder kinds of cultivation. Still in every country, and especially in this country, we ought to be agreed upon some system of statistical tests, available at short intervals, for indicating beyond cavil whether our population, or at least a large portion of them, are in prosperous or adverse circumstances. The quarterly reports of the Registrar-General do accomplish this purpose, so far as Births, Deaths, and Marriages are concerned, and accomplish it in a manner which leaves nothing to be desired. We have then to ascertain into how many other departments we can carry the exhaustive method we have already applied to vital statistics. I have a strong opinion that it will be found possible, even with our existing materials and machinery, to accomplish a great deal more in this direction than most of us would, in the first instance, suppose to be possible.

The most notable and important work connected with statistical research which has appeared for a long period is the Rev. Professor Rogers's* two volumes, published by the University of Oxford in 1866, under the title of "*A History of Agriculture and Prices in England, 1259—1400.*" The materials of the work were collected,

* "*A History of Agriculture and Prices in England from the year after the Oxford Parliament (1259) to the commencement of the Continental War (1793).* Compiled entirely from Original and Contemporaneous Records." By James E. Thorold Rogers, M.A., Professor of Political Economy in the University of Oxford, and Tooke Professor of Economic Science and Statistics in King's College, London. London: vols. i and ii, 1259—1400 (pp. 1456). Oxford: Clarendon Press. 1866.

arranged, translated, and tabulated by Mr. Rogers, from original parchment records, which by great industry he discovered in the muniment rooms of New College, and some other similar foundations at Oxford. The facts, therefore, included in the volumes have an authenticity beyond dispute, and they moreover represent actual transactions carried on for long periods of time by persons of the same class and pursuing the same objects. The range of the facts themselves is extensive. They include all kinds of agricultural and grazing produce, building materials, articles of clothing, implements of trade and husbandry, expense of conveyance and travelling, and so forth.

Mr. Rogers says in his preface:—"There is no need of any apology in offering the facts contained in these volumes to such persons as are interested in the social history of the southern part of our island. They are an attempt to satisfy a total void, namely, the complete absence of all satisfactory information on Prices in mediæval England. As no treatment of the subject has been in any sense heretofore attempted, it was necessary to publish the great mass of facts which have been gathered, as well as to offer comments on their significance.

"There is no European country, I believe, except England, the archives of which could supply satisfactory evidence of prices. Up to the time of Henry VIII, the changes in the English currency, even if they were really operative in prices, were effected at well-known dates. * *

"Such labours as those which I have undertaken are essential to that economical interpretation of history which I venture in asserting is as important an aid towards the comprehension of the past, as the study of legal antiquities, of diplomatic intrigues, or of military campaigns. There are very few important events on which an estimate of those facts which form the special study of the economist would not throw great light. * * * Nor is the bearing of such facts as will be found recorded in these volumes without its meaning on those maxims of Political Economy, the adoption of which is already general, and the practice of which is destined at no remote period to become the chief function of wise government. All Economists profess that the illustration of facts is quite as important in the method of their science as the discussion or elucidation of principles. In my opinion, it is even more important, because these facts form the basis for economical deductions. Very few authors, however, have combined exact reasoning with plentiful illustration; very few, however much they have professed to defer to experience, have undergone the drudgery of patient observation. Adam Smith and Tooke are eminent exceptions."

These passages convey an outline of the *principle* of Mr. Rogers's Inquiry, but they most inadequately indicate the thoroughness, patience, honesty, and scientific precision with which he has worked out his truly comprehensive design. Mr. Rogers has not only collected and arranged the facts in logical and natural order, but he has fortunately employed the larger part of his first volume in a careful discussion of the results which the evidence presents and suggests; and in that volume, I do not hesitate to say, may be read for the first time a true history of the English producing and working classes during the thirteenth and fourteenth centuries.

The University of Oxford has done wisely in taking charge of the printing and publication of a work which adds so largely to the solid fabric of exact knowledge, and does so much honour to a man who has won an enviable place in those intellectual competitions which during the last fifty years have regained for Oxford its early usefulness and fame.

Next in order of merit and value to the work of Professor Rogers, I must place the series of reports presented to the Congress of the United States by Mr. David Wells, the Special Commissioner of Revenue to the Executive at Washington.

Mr. Wells commences his Third Annual Report,* dated Washington, January, 1869, by saying:—"I propose in this, my Third Annual Report, to ask the attention of Congress to the results of a somewhat extended investigation instituted with a view, not of establishing or confirming any particular theory, but rather of determining through the collection of positive data what policy in legislation is likely to prove hereafter most advantageous to the Revenue, and most certain to establish the credit and industry of the whole country upon a sound and substantial basis."

Mr. Wells then proceeds in the Third, as in the two previous reports, to a systematic and minute examination of an immense body of facts collected from all quarters, and with exceeding diligence and care, calculated to show the real condition of the several regions of the Union, and to indicate the financial and fiscal policy best suited to their requirements. The object, therefore, of the reports is eminently scientific, and they furnish one of the most remarkable instances hitherto on record of a high executive officer, publicly addressing a Legislature in such language and seeking to convince them by such a method.

Nor is the entire tone and character of the Reports themselves less commendable than the principle on which they are constructed. The language and arguments are those of a patient and candid observer and reasoner. In no sense that of a man who had formed

* "Report of the Special Commissioner of the Revenue for the year 1868," Washington. January, 1869.

certain opinions *à priori*, and was determined therefore to employ all the arts of ingenuity and persuation to enforce them. We may, therefore, refer with satisfaction to these official memoirs by Mr. David Wells as successful examples of the application to purposes of practical government of those exact methods of observation and record which it is the chief purpose of this Society to enforce and render perfect.

A third recent publication to which I am bound to refer is the volume which has appeared in Paris this year (1869) by M. Maurice Block,* and entitled "*L'Europe Politique et Sociale.*" The author describes his object as follows:—

"Le but du présent ouvrage est d'exposer, de la manière la plus claire et la moins aride, les faits politiques et les faits sociaux les plus importants et d'en extraire les enseignements qu'ils renferment. Nous nous sommes mis à l'œuvre sans autre parti pris que celui de rechercher la vérité et de la dire sans crainte: c'est qu'il faut du courage pour dire la vérité. A de rares exceptions près tous les chiffres présentés dans ce livre ont été extraits des documents originaux.

"Le plan de l'ouvrage ressort suffisamment de la table systématique des matières ci-après. Nous avons divisé notre livre en trois parties: les deux premières étudiant *comparativement* les Etats de l'Europe tant au point de vue politique qu'au point de vue social: la troisième présentant dans une série de tableaux sommaires la situation de chaque Etat. Chacun de ces tableaux constitue la monographie d'un Etat Européen. Nous croyons que ce plan facilitera à la fois la lecture et les recherches."

The previous reputation of M. Block justifies us in expecting that a scheme of this nature deliberately adopted by him would be carried into execution not only with fulness and accuracy, but also with a degree of originality and freedom not often found in combination with qualities of the patient and exact order; and the result entirely justifies these expectations. The work is in all respects one of authority. It is full of original reflexions and suggestions, and in the hands of M. Block the application of the statistical method is marked by a comprehensiveness and precision which raises it, in many respects, to the level of the exact sciences.

I may again refer to the volumes by Professor Rogers, and the mediæval economical history of this country, for the purpose of suggesting, that among the future labours of the Society, I trust that a place will be found for one of the objects always contemplated by

* "*L'Europe Politique et Sociale.*" Par Maurice Block. Paris: 1869. 1 vol. 8vo, p. 630.

our founders. I mean the republication, with needful and illustrative facts and commentaries of well-known important statistical writings of former periods. For example, there is no complete or properly edited edition of the writings of Gregory King, and the same may be said of the writings of Sir William Petty and Sir Josiah Child. There are also several valuable tracts by Dr. Price, and around Chalmers' Estimate of the resources of Great Britain, in the middle of last century, much instructive evidence might be collected, and much profitable discussion might arise. Mr. Rogers has shown us how much may be learnt by an intelligent investigation of the facts of an early period of our history, and as we come nearer to our own time, it is certain that the interest and instruction will increase and not diminish.

It would be very gratifying to me if I could announce in this address any real progress towards the provision of a suitable building, on a suitable site, in which might be accommodated the twelve or more societies* pursuing objects more or less analogous to our own. Burlington House, and the Jermyn Street Museum are the homes of the Physical Sciences; South Kensington is the central authority in Art and Design; the British Museum represents Literature; and the Record Office and its adjuncts Antiquarian research. There is still wanted, and as it seems to me urgently wanted on grounds of public convenience and utility, a central home of the Social and Mixed Mathematical Sciences—sciences which have risen rapidly into power, and are yet only in their youth. Now, as always, I strongly deprecate any State patronage or subsidy, but it would be quite possible to frame a scheme under which a combination of independent societies, such as are mentioned at the foot of the page, could raise an aggregate annual rent, offering a reasonable return on the capital invested in a building. Discussions are already started regarding public edifices at the western end of the Thames Embankment; and I venture thus early to put forward a claim for consideration, on the independent grounds I have stated, on behalf of the active and progressive cultivation of the different branches and aspects of the new but already established Social Sciences.

To return, however, to the more general topics of this address:—The one overpowering result which ever arises as the result of our most complete and successful studies in these Social Sciences,

* The following fifteen societies naturally group themselves in the same category:—Statistical, Actuaries, Surveyors, Juridical, Medical Officers, Epidemiological, Mathematical, Meteorological, Social Science Association, Chambers of Commerce, Philological, Schoolmasters, Colonial, Emigration, Reformatory and Refuge Union.

whether relating to the Past or the Present—but especially as they relate to the Present—is the conviction that until the popular Education given in our schools to the boys and girls of the working classes is made to convey more industrial and economical knowledge we shall encounter all the complexities of an increasing population and a limited territory with greater and greater difficulty. With eight-tenths of our people living on wages of one sort or another—that is, depending for life and comfort on the effective demand for skill and labour—it is so manifestly our first duty to teach to every child the rudiments at least of those branches of knowledge which concern wages, and the prosperity of labourers and employers, that at no distant period the wonder will be indeed great that we persisted so long in teaching almost all subjects but these. The standard of living, comfort, and education among the body of the people can only be advanced as a consequence of previous accumulations of capital; accumulations of capital can only arise from a steady increase of gross produce as the result of more perfect skill and more perfect command over the domain of nature, and the superiority of one country over another can only arise from greater force of mind and greater resources of knowledge and invention. But the first and fundamental condition is to include in our popular education so much industrial and economical teaching as will enable every child in the country to apply its strength and intelligence to the best advantage; and so long as this end is attained, a wide latitude may safely be left to the rest of the curriculum. But besides this neglect, hitherto, of the economical element in education, there are at work in Europe three other great evils, the removal or abatement of which would go far to renovate the aspect of modern social life,—namely, the neglect of fresh air and pure water; the abuse of strong drinks; and the excessive expenditure on armed forces. If to the waste of power and waste of capital occasioned by defective education, we add the destruction of energy, intelligence, and life arising from the three causes just named, we may safely affirm as a statistical fact not to be impugned, that until these evils are removed every ameliorative device of modern civilisation is deprived of its most vital force and virtue.

The audience whom I address have at least the satisfaction of reflecting that the enterprise they foster—an enterprise I have shown to be already crowned with large and solid success—derives its claims and dignity from the very circumstance that it seeks to advance the condition of Men in Societies by ascertaining, with scientific impartiality and preciseness, the origin, nature, and effect of those influences which both deteriorate and improve modern communities. We disclaim sentiment and declamation, but without denying the proper functions of either under suitable circumstances.

We equally disclaim pre-arranged systems of opinion or doctrine. We believe in no system except that of Truth, followed with a single purpose, in a patient spirit, and with honest zeal. We owe allegiance to no party or sect—to no State authority—and to no traditions, whether of earlier or later times. We are not impatient to discover the whole truth even as it applies to our own limited field at once; for we know full well that the growth of Scientific Certainty has been, and must be always, slow and fluctuating; but we also know that to the thoughtful and honest inquirer the difficulties of the path are not discouragements, nor its devious windings more than incentives to fresh efforts; persuaded as he is that where passion, interest, and prejudice do not interfere, the ultimate end must be some near obtainment of the noblest of all conceivable visions—a vision, namely, of Truth, pure, cloudless, and supreme.

APPENDIX A.

The following is the ROLL of PRESIDENTS of the STATISTICAL SOCIETY
since its FOUNDATION *in* 1834.

1834-36.	MARQUIS OF LANSDOWNE.	1853-55.	EARL FITZWILLIAM, K.G., F.R.S.
'36-38.	SIR CHARLES LEMON, BART., M.P.	'55-57.	EARL OF HARROWBY, F.R.S.
'38-40.	EARL FITZWILLIAM, F.R.S.	'57-59.	LORD STANLEY, M.P.
'40-42.	LORD VISCOUNT SANDON, M.P.	'59-61.	LORD JOHN RUSSELL.
'42-43.	MARQUIS OF LANSDOWNE.	'61-63.	RIGHT HON. SIR JOHN PAKINGTON, BART., M.P.
'43-45.	LORD ASHLEY, M.P.	'63-65.	COLONEL W. H. SYKES, M.P., F.R.S.
'45-47.	LORD MONTEAGLE.	'65-67.	LORD HOUGHTON.
'47-49.	EARL FITZWILLIAM, F.R.S.	'67-69.	RIGHT HON. W. E. GLAD- STONE, M.P.
'49-51.	EARL OF HARROWBY.	'69.	WILLIAM NEWMARCH, F.R.S.
'51-53.	LORD OVERSTONE.		

APPENDIX B.

As the Prospectus of the Society and the First Report are now out of print, it is considered desirable to insert them as an Appendix to the foregoing address.

PROSPECTUS
OF THE
OBJECTS AND PLAN OF OPERATION
OF
THE STATISTICAL SOCIETY OF LONDON,

Founded on the 15th March, 1834,

In pursuance of a Recommendation of the

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE Statistical Society of London has been established for the purposes of procuring, arranging, and publishing “ Facts calculated to illustrate the condition and “ prospects of Society.”

The Statistical Society will consider it to be the first and most essential rule of its conduct to exclude carefully all opinions from its transactions and publica-

tions—to confine its attention rigorously to facts—and, as far as may be found possible, to facts which can be stated numerically and arranged in tables.

The first operation of the Society will probably be to subdivide and organise its General Council in such a manner as may enable that Council to deal conveniently with all the subdivisions of the subject-matter before it. Those subdivisions will necessarily be numerous.

The whole subject was considered by the statistical section of the British Association at Cambridge, as admitting a division into four great classes.—

1. Economical Statistics.
2. Political Statistics.
3. Medical Statistics.
4. Moral and Intellectual Statistics.

If these four classes are taken as the basis of a farther analysis, it will be found that the class of

Economical Statistics comprehends, 1st, the statistics of the natural productions and the agriculture of nations; 2ndly, of manufactures; 3rdly, of commerce and currency; 4thly, of the distribution of wealth, or all facts relating to rent, wages, profits, &c.

Political Statistics furnish three subdivisions, 1st, the facts relating to the elements of political institutions, the number of electors, jurors, &c.; 2ndly, legal statistics; 3rdly, the statistics of finance and of national expenditure, and of civil and military establishments.

Medical Statistics, strictly so called, will require at least two subdivisions, and the great subject of population, although it might be classed elsewhere, yet touches medical statistics on so many points, that it would be placed most conveniently, perhaps, in this division, and would constitute a third subdivision.

Moral and Intellectual Statistics comprehend, 1st, the statistics of literature; 2ndly, of education; 3rdly, of religious instruction and ecclesiastical institutions; 4thly, of crime. Although fourteen subdivisions have now been enumerated, it is probable that more will be required.

It will not of course be necessary to have a distinct subcommittee of the Council for each of these subdivisions; but a convenient division of the Council, and an arrangement of the individuals composing it, so as best to deal with all the different portions of the common subject, will be a necessary preliminary to any systematic course of inquiry.

When these subdivisions are established, it will be for them, subject to the approbation of the Council, to sketch the outline of their own operations. A few observations on the more general efforts and objects of the Society are all that need be presented here.

It will be desirable that the Society should, as soon as possible, endeavour to open a communication with the statistical department established by Government at the Board of Trade. Without such a communication constantly kept up, the Society can never be assured that it is not doing unnecessarily what the Government is doing at the same time and better. The result of such a communication would probably be that the Society would abandon to the care of the Government some part of this very extensive field of inquiry altogether, and more of it partially, which would still leave a very sufficient, though a less overwhelming task to the Society.

The Society having its own work thus somewhat limited and defined, may next proceed to consider the best means, 1st, of collecting fresh statistical information; and, 2ndly, of arranging, condensing, and publishing much that already exists. Towards collecting fresh statistical information, the first step, in order both of time and importance, would be the arrangement of a good set of interrogatories, to be drawn up under the superintendence of the subcommittees, and afterwards examined, sanctioned, and circulated by the Council. The careful execution of this task is

essential, both to afford guidance and aid to individual inquirers, and to protect the Society against the influx of imperfect or irrelevant statements. Willing agents of inquiry exist in abundance, quite ready to aid in collecting materials; but few of these agents take a very wide view of all the objects of statistical inquiry, and indeed, few have very distinct notions about the precise information the Society may wish to collect, even as to any one object. To sketch, therefore, distinctly, by means of interrogatories carefully and succinctly drawn, the whole outline which it is wished to fill up, is the only way to secure to the Society the full benefits to be expected from their zeal. It is difficult to overrate the importance of the step which will be made towards the accumulation of statistical knowledge from all quarters of the globe, by the publication of such a set of questions; but the operation will be as laborious as it is important. It properly may, and probably will, form the chief object of the exertions of the Council during the first year of the Society's existence.

Obvious advantages may be drawn from communication with intelligent Englishmen about to travel abroad, with residents in the colonies, and with colonial gentlemen resident in England. The Society has already the satisfaction of knowing, that it will have friends and assistants equally zealous and able in our western colonial possessions. Various societies, foreign and domestic, abound both in our own country and on the continent, some of them already devoted to this subject, and others very willing to take it up. In addition to those already in existence, the Society may hope to see other local societies springing up in every part of the British dominions, in direct and constant connection with the London Society; circulating its queries in their immediate neighbourhood, and collecting and authenticating the answers. A body of facts can be thus most conveniently collected, which may properly enter into a common publication, and will afford safe grounds for comparing the present condition and future progress of different parts of the empire. The London Society, therefore, will carefully cultivate a connection with, and attend to the wishes and suggestions of, such local societies, and will look forward to their multiplication and correspondence as among the best supports of its own continued efficiency.

The collection, by such means and agents, of new statistical materials, will form, it will be remembered, only one part of the Society's work. To condense, arrange, and publish those already existing, but either unpublished, or published only in an expensive or diffused form, or in foreign languages, would be a task of equal usefulness. Authentic statistical accounts, even of an old date, may perhaps advantageously receive some attention. Our Oriental dominions alone present a field of statistical research as interesting as it is immense. Many materials, collected from that field by the meritorious exertions of the East India Company, are known to be in existence, and it is to be hoped that, sooner or later, they will be brought through some channel before the public.

To point out such existing collections, old and new, their character, value, and the degree of interest attached to them, will form an appropriate part of the duties of the subcommittees of the Council, and will itself be a considerable step in statistical knowledge. The extent to which the Society shall deal with the existing materials so pointed out to it, can only be considered when the means and resources it is to possess are better ascertained.

It will of course be one prominent object of the Society to form a complete statistical library as rapidly as its funds may admit.

HENRY HALLAM,	} <i>A Provisional Com-</i>		
CHARLES BABBAGE,		} <i>mittee authorised</i>	
RICHARD JONES,			} <i>to issue this Pro-</i>
JOHN ELLIOTT DRINKWATER,			

LONDON, 4, ST. MARTIN'S PLACE,
April 23, 1834.

REPORT of the COUNCIL to the ANNIVERSARY MEETING,
16th March, 1835.

THE Council of the Statistical Society of London, in making their first Annual Report, feel that they have much reason to congratulate the Society on its present state and prospects, the number of Fellows up to the present time belonging to the Society, is 398. The Council believe that no Society established for similar purposes could show such a list in the first year of its existence.

A special general meeting, summoned on the 30th May last, entrusted to the Council the power of admitting Fellows without ballot until the commencement of the present session. The Council then stated their opinion that the continuance of this power would be beneficial to the Society, and have much satisfaction in reporting that this anticipation has been realised—ninety-nine Fellows having been admitted by the Council under this power.

Although the Council do not propose to establish the practice observed by some societies, of noticing the loss of distinguished Fellows, they feel themselves compelled to make one exception to the rule which they recommend for future observance. The name of Mr. Malthus is so celebrated in every part of the world where the science of statistics is cultivated, and the impulse given by him to the study of this science (especially in that important branch of it with which his reputation is peculiarly connected), that the Council cannot refrain from expressing their sense of the great loss which the Society has experienced by his lamented death. The constitution of this Society precludes the Council from passing judgment upon the opinions which have made his name so distinguished: it is on different grounds, it is in the character of an ardent lover of truth, of a sedulous investigator of facts, and a generous encourager of all who have been stimulated to follow in the same laborious path, that the Council deplore the loss of one of the principal founders of this Society.

The Council have not thought fit to exercise their power of recommending any foreign members for election by the Society in addition to Mr. A. Quetelet, whose name is already enrolled among its founders. There are many distinguished foreigners whom the Council would gladly see associated with the Society, and of whom it is known, not merely by the general interest which they take in the progress of statistical knowledge, but also from personal assurances that they feel anxious to promote its objects. But it has been considered advisable by the Council that the selection of such foreign members by this Society should be postponed until its proceedings have been farther matured, so that those who may be selected for this distinction may feel that while they confer, they also receive, honour in becoming associated with its inquiries.

One object which the Council have had constantly in view is the encouragement of corresponding provincial societies; and it is gratifying to the Council to be able to announce that a very lively interest on this subject is evinced in various parts of the country. Statistical societies are either formed, or on the point of being formed, in Birmingham, Edinburgh, Glasgow, Hull, Liverpool, Manchester, Worcester, and other places, and the correspondence of the members of the Council entitles them to expect that the example set by these great towns will soon be very generally imitated.

The financial affairs of the Society are in a very flourishing condition: of the 398 members, 28 have compounded, leaving 370 annual subscribers. The sum of 567*l.* being the amount of the compositions before the commencement of the present year, has been invested in the $3\frac{1}{2}$ per cent. Reduced Annuities, in the names of the trustees of the Society, and, after the payment of every expense incurred to the end of last year, there remained in the hands of the treasurer and secretaries the further sum of 148*l.* 19*s.* 2*d.* The amount of subscriptions owing for the past

year, on the 1st of January, 1835, was 151*l.* 4*s.* Of this amount the sum of 27*l.* 6*s.* has been since received, thus leaving the sum of 123*l.* 18*s.* still due on account of the subscriptions for 1834.

The treasurer's accounts have been examined by the auditors; their report was presented and read at the last ordinary meeting of the Society, and will be again read to the present meeting. The auditors have suggested some alterations in the manner of passing the accounts, which the Council have had under consideration, and have adopted.

A few changes in the regulations of the Society have been proposed, and resolutions embodying them will be submitted at the conclusion of the reading of this report, to the determination of the Society. The only points of importance relate to the manner of admitting Fellows, and of choosing the Council and officers of the Society.

The existing regulations require that the certificate of every candidate should be suspended in the meeting room of the Society during two ordinary meetings before that at which the vote shall be taken on the question of his admission. When this regulation was framed, more frequent meetings of the Society were contemplated than have been since thought advisable. It appears that the time of three months, during which the regulations now require the suspension of these certificates, is unnecessarily long: one resolution is intended to abridge this period.

The appointment of a Council of thirty-one members was only for the year which is on the point of expiring, and no provision has been yet made for regulating the manner of its continuance. The number has been found suitable, and it is proposed that it should be continued, and that six Fellows at least who were not of the Council of the previous year, shall be annually elected.

Some provision, also, is necessary to meet the contingency of extraordinary vacancies in the Council, or among the officers of the Society: a resolution has been prepared which provides for filling all such vacancies in the same manner as, by the existing regulations, an extraordinary vacancy of the president's chair can be supplied.

It is also proposed, in order to avoid postponing the confirmation of the minutes of the general meeting until the next anniversary, that they shall be read and confirmed at the next following ordinary meeting after the day of such anniversary meeting.

The regulations provide that the Council shall declare, at the anniversary meeting, the time for holding the ordinary meetings in the ensuing year. As the day and hour already fixed upon have been found convenient, the Council hereby declare that these meetings will continue to be held at 8 o'clock of the evening of the third Monday in each month during the Session of 1835-36.

The Council have concluded an agreement with the Royal Society of Literature, for the use of the rooms in which the ordinary meetings are held, at the annual rent of 100 guineas. A condition is inserted in the agreement, for permission to hold the anniversary meeting in the rooms in which the Society is now assembled. A desire has been expressed by some Fellows of the Society that the attention of the Council should be directed towards procuring more capacious apartments, but, although the Council are aware that additional accommodation may be required at no very distant period, they cannot recommend that the Society should involve itself in any additional expense on this account, until some inconvenience shall have made itself practically felt in their present situation.

The Council at first attempted to transact their business with scarcely any assistance but that of the honorary secretaries, and the best thanks of the Society are due to those gentlemen for their unremitting exertions. It was soon evident, however, that the demands upon the time of the secretaries were greater than the Council considered themselves justified in making, or the secretaries were able to afford. The Council, therefore, decided on appointing a salaried assistant-secretary,

and have much reason to congratulate the Society on the intelligence and activity already displayed by the gentleman on whom their choice has fallen.

The attention of the Council has been directed to the formation of a statistical library. Numerous valuable donations have been received from various Fellows of the Society, partly by unsolicited donations, and partly in consequence of a circular letter sent round by the Council. A library committee has been appointed, and is proceeding with the formation of a list of standard works, which it will recommend to the Council for purchase. Daily attendance is given at the rooms of the Society, to accommodate those Fellows who may wish to consult such works as the Society already possesses.

In the prospectus which was issued immediately upon the formation of the Society, the circulation of an extensive list of queries was pointed out as one of the most effectual means of accumulating statistical information. This important requisite has not been neglected, but the preparation of such a list demands considerable time, and it is desirable that none should be issued with the sanction of the Society which has not received very mature consideration. An experiment has been made in the transmission of a circular form to a great number of savings banks, which is still in course of further circulation, in order to ascertain how far the Council may reckon on procuring direct communication by such means. It has been constructed on the model of a very full return sent to the Council from the Devon and Exeter Savings Bank, and, if extensively answered, will embody a great number of interesting particulars not given by the Government returns.

These particulars, with some other valuable papers already in the hands of the Council, will probably form part of a volume of transactions which it is the intention of the Council to prepare for publication, as soon as it has accumulated original materials of sufficient value. The sum of 100*l.* has been placed at the disposal of a publication committee, in order to defray the necessary expenses incident to that undertaking. In the meantime, it has been resolved to print, for the use of the Fellows, an abstract of the monthly proceedings and papers read to the Society, similar to those printed by many other scientific societies. These will commence from the first ordinary meeting, and will be distributed gratuitously to the Fellows. They will be sent round to all those who live in London and the immediate vicinity, and Fellows residing at a distance, may receive their copies on application at the rooms of the Society.

These abstracts will be printed from time to time, according to the number and value of the communications; their interest and importance will depend upon the exertions of the Fellows themselves; and the Council feel that they may confidently anticipate that these accounts will soon indicate, in a manner beyond dispute, the zeal, industry, and intelligence of those who contribute to fill their pages.

REPORT on the SEVENTH INTERNATIONAL STATISTICAL CONGRESS, held
at the HAGUE, 6th—11th September, 1869. By SAMUEL BROWN,
Esq., F.S.S., President of the Institute of Actuaries.

[Read before the Statistical Society, 21st December, 1869.]

CONTENTS:

	PAGE		PAGE
Introduction	391	Section IV, Fisheries and Com-	
Propositions in the “Avant-Con-		merce	406
grès”	394	Section V, European Transoceanic	
Opening Address of the Minister		Possessions	407
of the Interior.....	395	General Assembly	407
Election of Presidents and Officers	396	Uniformity of Weights, Measures,	
Presidents and Officers of Sections.	397	and Money	409
Section I, Theory of Statistics and		Publication of International Sta-	
its Application.....	397	tistics	409
Section II, Civil and Commercial		Statistics of Agricultural Products	409
Justice.....	402	„ Military Economy ...	409
Section III, Finance	404	Conclusion	410

Introduction.

THE great improvements which have been made of late years in the collection and publication of Government statistics, especially in those which may be called international, and relate to the comparison of the condition and progress of different countries, cannot fail to be perceived by any one who has had occasion to consult such works. Much of this improvement is owing to the uniformity of method in research, and the lucid arrangement of details which have followed the adoption of the resolutions of this International Congress. The most marked advance has been made in population and vital statistics, and these are of the first order of interest and importance. In other branches, various degrees of improvement may be traced in different countries. Large allowance must, however, be made for delay, when we consider that not only have new methods to be employed and new subjects to be treated, but what is more difficult still, reforms to be effected in existing systems in the face of prejudices and routine, requiring both time, labour, and expense, which are with difficulty spared from other branches of the public service. In the meantime, so vast is the range of subjects affecting the condition and prospects of man in society, that notwithstanding that seven Congresses of Government and other delegates from all parts of the world have been held to discuss the principles on which inquiries should be conducted, and suggest the

best methods of collecting the facts, there is still ample material for further debate.

Every new Congress has an interest of its own, since there are sure to be some subjects which particularly affect the country in which it is held, and which, whilst in some degree novel to the foreign members, tend to throw light by their discussion on some branches of political or social economy. Such will be found the case in the programme of the Congress at the Hague.

At the Sixth Congress, held at Florence in 1867, it was left to the Organisation Commission to settle the next place of meeting, and the invitation of the Government of the Netherlands having been accepted, and an official notification thereof given by the Italian Government, the Congress was fixed to take place at the Hague, from the 6th to 11th September.

The King of the Netherlands, by a decree of 17th October, 1868, appointed a Commission of Organisation, composed of eminent official and scientific men, under the presidency of M. C. Fock, the Minister of the Interior. Wishing also to show the great interest which he took in the subject, his Majesty, by another decree, nominated his Royal Highness the Prince of Orange, Honorary President of the Congress.

The labours of the commission were greatly facilitated by a very elaborate and able paper by M. von Baumhauer, called "Idées-mères ou plan motivé d'un programme pour la Septième Session du "Congrès International de Statistique." Reviewing the work which had been done at the former meetings, and the questions still left incomplete, and wisely proposing to confine within definite limits of great interest to Governments the points to be debated, he proposed their subdivision into five distinct sections. Each of these contained specific topics of debate, and under every head M. von Baumhauer has furnished the reasons for their choice, and a historical survey, exhibiting most deep and varied research.

Without adopting all the details, the commission made this admirable paper the basis of their programme, and applied to the foreign official delegates and other men of science for their ideas thereon, so as to give it as international a character as possible.

The subjects for discussion were finally divided into five sections.

Section I.

- a. *Theory of Statistics, and Application of Statistical Data.*
- b. *Limits and Methods of Statistics.*
- c. *Graphic Method of Statistics.*
- d. *The Question of Still-born Children in relation to the Movement of Population.*
- e. *Methods of Constructing Tables of Mortality and Survivorship.*

Section II.—Statistics of Civil and Commercial Justice.

- a. *Gratuitous Judicial Aid.*
- b. *Mortmain.*
- c. *Insolvencies and Bankruptcies.*
- d. *Share Companies.*
- e. *Statistics of Judicial Organisation.*

Section III.—Financial Statistics.

- a. *Statistics of the Survey of Land (Cadastre).*
- b. *Credit Foncier.*
- c. *The Annual Revenue of the Nation.*
- d. *Statistics of Commercial Duties.*
- e. *Finances of Communes, of Territorial Districts, Corporations, &c.*
- f. *Banks of Issue and Other Institutions of Commercial Credit.*

Section IV.—Fisheries and Commerce.

- a. *Statistics of Fisheries.*
- b. *Statistics of Foreign Commerce.*

Section V.—Statistics of European Trans-oceanic Possessions.

Although it was intended to limit the subjects within reasonable bounds, there is evidently in this sketch sufficient to interest a large body of delegates from all parts of the world, and some of them especially attractive to the members from this country.

At the Congress at Berlin, on the motion of M. Quetelet, a preliminary meeting or “avant-congrès” of the official delegates was held, and from its great utility is likely to be continued at future meetings. Its object is to organise the proceedings, and consult on the best method of carrying into practical effect the resolutions of the Congress.

A very cordial reception was given to the invited members in a soirée on Friday, the 3rd September, at which the Minister of the Interior and the Burgomaster of the Hague welcomed them in the warmest terms. M. Wolowski, on the part of the foreigners, replied, and spoke of the deep interest which Holland had always taken in questions of political economy, finance, and social science, and trusted that by the useful labours of the meeting they would do something to acquit the debt of gratitude which was due to that enlightened country. Lord Houghton, speaking more especially for the delegates from this country, alluded to the rapid growth and cultivation of such studies in countries where freedom and independence led to open discussions of subjects so important

to the progress and prosperity of the people; and referred in eloquent terms to the historic sympathy and material interests which had so long bound England and Holland in cordial relations.

At the meeting of the “*avant-congrès*” the next day, at which M. Quetelet was elected president, that eminent statistician, in order to give a practical direction to the labours of the Congress, proposed that there should be periodically published synoptical tables of the leading statistical facts of all countries, in the same form, and under the same heads. After much discussion, the assembly adopted the resolution, leaving to an International Commission, to be named hereafter, the periods of publication, and the details to be inserted.

The next proposition was an important one by M. David (delegate from Denmark). It was to the effect—

1. That in the general assembly any member might propose amendments on the conclusions of the reports from the Section which might be discussed, but the general assembly should not vote or come to conclusions.

2. That the official delegates and scientific men specially invited, should meet for two days after the close of the discussions, and come to a definitive vote on the questions debated, such votes only to be considered as the resolutions of the Congress, and presented and recommended as such to their respective Governments by the official delegates.

A lively debate ensued, and various amendments were proposed by M. Visschers, to the effect that the general assembly on discussion of the conclusions of the reports, should adopt or reject them, leaving to the proposed reunion of official delegates to decide on the form and general plan of the tables required, which are to be printed and sent officially to the different Governments.

Mr. Ruggles, delegate of the United States, proposed that only the official delegates should be allowed to vote, and each country only have one vote.

M. Semenow, delegate from Russia, more nearly accorded with the proposition of M. Visschers, proposing general conclusions to be voted in the general assembly, and special conclusions as to the principles and details of execution to be adopted in the “*après-congrès*.”

Lastly. There was an amendment of M. Heuschling, tending to the union of statistics with diplomacy.

The whole subject was eventually deferred for further consideration at the next Congress, except that a modified proposal of M. Legoyt was adopted, that the official delegates should meet in an “*après-congrès*” to examine the decisions of the general

assembly, and append such observations to be transmitted to the respective Governments as they might deem necessary.

The regulations for the session were then discussed and carried; the reports of the official delegates on the condition of statistics in their different countries, were decided to be merely deposited and not read; and the answers of foreign Governments as to allowing the free postage of statistical documents, were communicated or explained.

M. von Baumhauer presented a very useful comparative table of the measures, weights, and monies of different countries.

The actual work of the Congress, however, began on the following Monday, when the first general assembly was held in the Rittersaal, or "Great Hall of the Knights of St. James." The Minister of the Interior, M. Fock, opened it with an eloquent address. After regretting the absence of His Royal Highness the Prince of Orange, Honorary President of the Congress, he alluded briefly to the preceding Congresses, and sketched the progress which his own country had made in statistical studies. The population statistics of Holland and West Friesland, published by the Netherlands Society of Literature in Leyden, as early as 1514, the early mortality and life annuity tables of Jean de Witt and Kerseboom, and the labours of Nicholas Struyck, in the first half of the eighteenth century, lead us down to the general census of 1795, made with the view of fixing the number of the representatives of the people in the Dutch Republic. Coming to recent times, King William I, recognising the utility of statistics for Government purposes, constituted, in 1825, a Central Statistical Bureau, to which was entrusted the statistical details of the foreign and home trade, and in the following year a statistical commission, presided over by the Minister of the Interior, and in connection with the Departments of Public Instruction and National Industry, and which, though dissolved in 1830, left evidence of its labours in published volumes and manuscript tables.

From 1829 the censuses of the population have been periodically made, the fifth of which will take place about the end of the present year. Since that date the improvement in the registration of births, deaths, and marriages, and the annual reports of M. Lobatto, which, from 1826 to 1849, were patronised by the King, William I, and placed in charge of a commission, the reports on public instruction since 1815, and the institution of statistical bureaux since 1851 in each province, show what great progress has been made. The minister then alluded to the extent to which the decisions of the previous Congresses had been carried out in Holland, and to the important questions which were now proposed for discussion, and concluded that comparative statistics offer a vast field for research.

The institution of these Congresses especially aims at comparing the progress made in different countries, and presenting facts in a form rendering the results capable of comparison. Progress is incessant. In every new session we hope to take steps further on the road traced by our predecessors. May this session show itself the worthy rival of the previous ones; distinguished by that love of humanity, those calm, peaceful, and profound discussions, and that spirit of cordiality, which have ever been the characteristics of these Congresses.

The assembly then proceeded to the election of the officers. The Minister of the Interior, M. Fock, was elected president; M. Adolphe Quetelet (Belgium), and M. David (Denmark), amidst much applause, were named honorary presidents; M. Vissering, who had been vice-president of the Organisation Commission, was elected vice-president, together with the official delegates of Foreign Governments; and M. Jacobi, the former secretary, was chosen secretary, with the addition of MM. Dr. Mayr (Bavaria), Worms (France), Samuel Brown (Great Britain), L. Bodio (Italy), A. de Bouchen (Russia), and L. Petermann (Saxony).

Various important communications or works were presented to the Congress or referred to the Sections in which they could be discussed. The reports on the labours of the statistical commissions and departments in foreign countries were deposited, but not read; amongst which may be noticed those from Baden, Denmark, Spain, Oldenbourg, and Sweden, which, with others yet to be presented, will no doubt appear in the "Proceedings" when printed.

Brief notices were then given by different speakers of some of the eminent members of former Congresses, whose deaths since the last meeting had to be regretted, although their names will live long in the science in which their works have caused so great a development. These were Baron von Hock, Privy Councillor of Austria; Dr. von Hermann of Bavaria, Professor in the University and Chief of the Statistical Department of Munich; M. Ducpetiaux, formerly Inspector-General of Prisons and Charitable Institutions in Belgium; Schubert, formerly Professor in the University of Königsberg; Cherbulier, formerly Professor in the Polytechnic School at Zurich; and Dr. Boudin. To this sad list was afterwards added the illustrious name of Lord Brougham, to whose great services in the advance of education, law, and social improvements in so many branches, Lord Houghton paid a short but eloquent tribute.

After a reception of the foreign delegates by the King, and afterwards by the Queen of Holland, at her palace "in den Bosch," the remainder of the day was taken up in organising the Sections and arranging their work. In the First Section M. Quetelet was,

with much applause, elected honorary president, and M. von Baumhauer president, and MM. Bourdin, Samuel Brown, Dr. Mayr, Bodio, and Petermann secretaries.

In the Second Section M. Jolles, Councillor in the High Court of the Netherlands, was named president; M. Visschers (of Belgium), and M. Yvernès (of France), vice-presidents; MM. Ameline (France), and Van Geuns (Holland), secretaries.

In the Third Section M. Wolowski was greeted as president with great applause; M. Bachiene and M. Vrolik, formerly Minister of Finance in the Netherlands, vice-presidents; and M. Baert, secretary.

In the Fourth Section, on the motion of M. Van Beek Vollenhofen, provisional vice-president, M. Maurice Block (of Paris), was cordially accepted as president; MM. Versmann (Hamburg), Bodio (Italy), and Weschniakow (Russia), vice-presidents; and MM. Buys and Pistorius (both of Holland), reporters.

In the Fifth Section, the president elected was the Honourable T. J. H. Thurlow, one of the Secretaries of Her Majesty's Legation at the Hague, to whose valuable reports I had so frequent occasion to refer in my brief notice on the Statistics of the Kingdom of the Netherlands; General Van Swieten and M. Veth, vice-presidents; Dumontier and Boudewijnse, secretaries; and M. Van Soest reporter.

As the subjects referred to the different Sections were discussed therein on consecutive days, until the general assembly on the following Friday, it will suffice to give a brief summary of the debates and conclusions of each Section, without following the order of each day.

FIRST SECTION.—*Theory of Statistics and Application of Statistical Data.*

a. Limits of Statistics.

Until the Congress at Florence, the theoretical part of the science of statistics was very little treated of, compared with its practical application. But at that meeting M. Quetelet, whose laborious and lengthened services in every branch of statistical research show the value of bringing to bear the highest mathematical reasonings on the difficult questions of social life, proposed that at the future Congresses there should be a special Section charged to consider statistical questions in direct relation with the theory of probabilities. The Commission accordingly considered that this and the following question would lead to confining within certain limits the immense range of subjects, and give a definite aim to the labours of so many willing workers.

The science of statistics has so intimate a connection with

physics in treating of the physical, moral, and intellectual progress of man, and with history, geography, and ethnography, in dealing with his social condition, that the domains of each science are continually being invaded. Some writers would confine it to the science of government; others considering it to denote any status or condition which could be expressed in numbers, would scarcely shut out any science or art from the range of their observations and deductions. The question, then, is to determine what place the science of statistics occupies amongst social and political sciences, and within what limits it might be confined, so as not to interfere with the progress of other sciences.

The elaborate paper by M. Vissering on this subject in the programme, is full of interest, and gave rise to an animated discussion. The Section, however, generally agreed with Dr. Engel, that it was next to impossible to give a strict definition of statistics, and he declared that he had found in different authors 180 different definitions.

He proposed, therefore, that, expressing gratitude to M. Vissering for his lucid and learned treatise on the objects and limits of statistics, the assembly should agree that these questions could not be decided by the vote of a public meeting, and that they ought to be left to the free investigation and conclusions of those who studied them.

This proposition was adopted, and Dr. Engel named to report upon it.

b. *Methodology of Statistics.*

The discussion of this question was based upon several propositions in the very interesting paper in the programme by M. von Baumhauer, in which the reasons for each are stated at length. The first proceeds on the distinction which may be drawn between Government statistics and purely scientific statistics. For instance, in early censuses made for the purpose of ascertaining the military strength of a nation, the males under 18 years of age were distinguished from those above, but no distinction of age was made for females. In Prussia and other German States, the population was given in 1858. Males under ages 0 to 14, 14—20, 20—25, 25—32, 32—39, 39—60, 60 upwards. Females, 0—14, 14—60, 60 upwards, whilst the death tables were divided into 0—1, 1—5, 5—10, 10—14, 14—20, and then by intervals of 10 years of age. The first have reference to the periods of service for the permanent army and the landwehr, and the two periods of age for the levée-en-masse or landsturm, and render useless the registration of the deaths for any scientific purposes. In like manner a collection of facts as to the number of cattle for the purpose of provisioning an army, or of horses and beasts of burden for cavalry service or transport made

in haste amidst an unwilling population, is not likely to be very accurate or available for ordinary purposes of scientific inquiry. Such reflections lead us to the conclusion that some methodical system should be adopted, after carefully considering the objects and uses of the observations and the best form of tables, not merely for the special, but for general purposes. The first resolution, slightly modified, was adopted to the following effect: "That the Governments should be invited in the preparation of forms or statistical tables, to take into serious consideration the interests and needs of science as well as of the administration."

Two propositions were also passed after some debate; one by M. Legoyt and the other by M. Semenow, to the effect that the statistical bureau should work with the concurrence of the branches of administration specially interested, and that wherever a Central Commission exists it should be consulted on every census or periodical inquiry as to the forms and statistical tables required or decided on by the different Governments.

The other propositions contained in M. Von' Baumhauer's able paper, had reference to the improvements in the collection and publication of facts, and the training of intelligent and zealous officials. M. Heuschling and M. Bourdin proposed making statistics a branch of practical study in all public schools and universities: further, that a clear account of the legislation, the instructions, and the forms relating to any particular inquiry should be given in the preface to the tables published, and that both the headings of the columns and the introduction should be in a language generally understood.

The Section also agreed to propositions on the importance of exactness and identity of the ratios in deductions drawn from observations; that in every registry of birth the age of the parents should be given, distinguishing the mother, if unmarried, from the married; that in all statistical researches the number, as well as the nature of the facts, should be published; and that in a series of large numbers, the variations from the mean number, as well as from each other, should be recorded. All these rules, if generally followed, will add considerable value to, and assist the comparison of tables in different countries.

c. On the Graphic Method of Statistics.

The comparison of statistics by curves, diagrams, and charts, whether coloured or not, has been extensively used in some branches, especially in those relating to health and mortality, density of population, education, crime, fluctuations of rates of interest, and prices of the funds, of corn, in meteorology, railways and canals, &c. But no general principles are settled by which the same forms should be used for the same class of events, nor as to specific

colours, nor scales or proportions of space; especially is there no connection between what is in common use in one country when compared with another. Very much remains to be done to obtain any degree of uniformity. But there can be no doubt that the laws of occurrence may be much better seen, and principles developed by making visible to the eye, by curves and diagrams, the deviations of any set of observations from the average results. The valuable papers by Mr. Babbage, Dr. Guy, Messrs. Streffleur, Sick, Koristka, and others in the reports of previous Congresses, and especially the work of M. Chevreul in the "*Memoirs of the Institute of France*," vol. xxxiii, are alluded to by M. Obreen, who wrote this interesting part of the programme. The Section came to a resolution, after a lively discussion, that it is very desirable that the principal official statistical documents should be illustrated by charts and diagrams.

A proposal of Dr. Engel was also carried, that the Organisation Commission of the next Congress, should prepare a memoir on the different graphical methods hitherto employed, and the best way of rendering them uniform and suitable for comparison with each other.

d. *Question as to the Number of Still-born Children in relation to the Movement of Population.*

The debate disclosed the difficulties of the subject, both in a medical and statistical point of view, increased by the different modes in which still-born children are entered in the register in different districts, even of the same country, still more in different countries. MM. Boogaard and Egeling briefly explained these discrepancies, and proposed (1) that in countries not recognising the still-born, the really still-born and those which have lived after birth, but died before the declaration of birth, should be entered in a special register; and (2), that in other countries there should be a separate register of those born dead, and the remainder, however short a time they have lived, should be entered both amongst the living and the deaths.

The representatives of different countries were then severally called upon to explain what is the practice, according to the existing laws, of each State; and on the motion of M. Legoyt, the first proposition was adopted for countries governed by the Code Napoleon; the term still-born children being limited to such as have at least six months of foetal existence. The second proposal, slightly amended in terms, was carried, as well as that the distinction should be kept up in the published returns of the movement of the population.

The last question is one of great importance:—

e. *The Methods of Construction, or the Calculation of Tables of Mortality and Survivorship.*

Both in his "*Idées-mères*," and in the short paper in the pro-

gramme, M. von Baumhauer has given a historical account of the gradual improvements which have been made by different writers in deducing correct tables of mortality from the original facts, and has also clearly pointed out in what respects the mere numbers taken at a census require correction. In taking the registers of particular classes, such as religious bodies, or members of life assurance societies, the years of life may be followed according to age, from the time of entry to the period of withdrawal from observation, and the proportion of deaths to years of life accurately ascertained. But the registers of population, births, deaths, &c., do not indicate with sufficient accuracy the number of the population exposed to risk, and which may be acted upon at different ages by epidemics, by emigration, immigration, in very different proportions. Again, a table of mortality implies the stationary condition of a population on a single fixed day, and it is evident that in the first year of life the number observed would not be the number born in the year, but only the survivors of those who were born in the first half or part of the year to the date of observation, which would be very different from the total number of years of life with which the deaths of the year should be compared.

The defective method of Moser has been corrected by Dr. Farr, Quetelet, Berg, and others. The method of M. von Baumhauer, explained in the "*Journal des Economistes*," February, 1868, and the recent memoirs of Dr. Bertillon and Dr. Knapp, in the "*Journal of the Statistical Society of Paris*," may be consulted with great advantage; but for a complete series of valuable notes on the construction and application of National life tables, we must refer to the numerous papers by Dr. Farr in the various reports of the Registrar-General of this country.

MM. S. Brown, Sprague, Homans (New York) took the opportunity of explaining the results of the recent valuable collections of the mortality experience of life assurance companies in Great Britain and the United States of America; and Mr. Thomson presented a separate report on that of the Scotch companies.

The proposition of M. von Baumhauer was finally carried with a slight amendment at the end, "that the deaths by age, representing in the table the deaths at each age during the year, or series of days of which the year is composed, ought to be compared with the number exposed to risk of death at each corresponding age during the entire series of days of which the year is composed."

A proposition of Dr. Berg, modified by M. Legoyt, was also passed, "that in the publication of official tables of mortality, the method on which they are constructed and calculated should be explained;" and further, "that the year of birth of the deceased

“ person, as well as the age, should be inserted in every registration “ of death.” M. Kjær (of Norway), also carried a resolution that in future censuses the native country of each inhabitant, as well as the age and sex, should be specified.

Mr. Chadwick's suggestion that there should be an annual instead of a decennial census, was referred to the next Congress.

Dr. Farr and Dr. Sibson presented a valuable work, published under the sanction of the College of Physicians, with the view of obtaining absolute uniformity in the nomenclature of diseases even in different countries.

Dr. Engel then proposed, in an eloquent speech, that in order practically to carry out the real objects of these Congresses, the official delegates should meet together, and each agree to take some specific subject, comparing the results on a uniform plan with those of all other countries, and thus by a subdivision of labour, the repetition of work would be avoided, and the desired end sooner obtained; the publication to be in French, and all the volumes of a similar character. This proposal was received with general assent. A meeting was held, the plan discussed, and each branch of statistics divided into twenty-four chapters, allotted to the statistical bureau of a different country. It is called “ *Statistique Internationale de l'Europe*.” The metric system of weights, measures, and money is to be adopted, and there is every reason to hope, that within a very short time, this grand idea of an authentic comparison of the actual social and economic condition of all the nations of Europe, will be an accomplished fact.

This closed the labours of the First Section.

The principal speakers in this Section embrace most of the names familiar to us as eminent writers and thinkers, MM. Quetelet, David, Vissering, von Baumhauer, Engel, Legoyt, Farr, Semenow, Heuschling, Mayr, Berg, Maestri, Kjær, &c.

The other Sections all had before them subjects of debate of the highest interest, but time does not permit to do more than briefly state the conclusions arrived at.

In Section II, *Statistics of Civil and Commercial Justice*, the first question was—

a. *Gratuitous Judicial Aid.*

The paper in the programme was written by M. Jolles.

The resolutions finally adopted by the general assembly, were to the effect that the official statistics on this subject should show—

1. What class of persons may demand the aid,
2. What conditions are necessary to obtain it, indicating especially if the poverty is absolute or relative.
3. Ought foreigners, charitable institutions, church administra-

tions, guardians, curators, to enjoy the benefit? If so, on what conditions?

4. From whom, and in what form, should it be claimed?

5. To what authority is confided the decision on the demand?

6. What is the procedure prescribed?

7. Are there auxiliary institutions (public offices for consultations gratis, &c.)?

8. What are the effects of admitting to this benefit?

9. May it be withdrawn? At whose instance, and in what cases?

The second question was the important subject of—

b. *Mortmain*,

which was defined by M. Van Hugenpoth in his very comprehensive memoir, as “all institutions, foundations, and communities, “whether ecclesiastical or lay, which are perpetual, and which by “substitution of persons, assumed to be always the same, produce “no change by death.” MM. Newmarch, Heemskirk, Rollin Jacquemyns, Visschers, De Bieberstein, Amélines, Heywood, Lord Houghton, Asser, joined in the discussion. The results, slightly modified, are given under the account of the general assembly.

The next subject—

c. *Insolvencies and Bankruptcies*,

was introduced by M. de Vries, and drew forth from M. Yvernès an explanation of the statistics of the subject as kept in France. Several speakers regretted that it should be so difficult to ascertain the causes of the failure. The report to the general assembly was entrusted to M. Worms (France), whose proposition was carried:—

“To add to the columns at present in use, the number of insol-
“vencies and insolvents, the character of the judgment given, the
“personal position of the insolvent, the trade followed, the nature
“of the accounts; the condemnations for simple bankruptcy and
“for fraudulent bankruptcy; the causes of these condemnations,
“and the number of discharges, &c.”

The question of—

d. *Share Companies*

was also very ably treated in the programme by M. Asser, Professor of Law at Amsterdam, who reported the results of the discussion, and expressed his hopes that the usual rule of Government control should give way to a more liberal system of allowing the shareholders themselves to act for themselves and consult their own interests. He proposed in minute details the statistics of share companies, distinguishing the class of companies according to their object, and according to their legal character; also as to their capital, amount of shares, amount paid up, &c., dividends, the number of societies dissolved, and the cause and manner of winding up, &c.

Lastly, in this Section M. Jolles brought up the report on—

e. *Judicial Organisation*—

Of which (1) the Governments should be invited to give a summary in the accounts published on the administration of civil and commercial law; (2) describing specially the number of the courts and tribunals, their composition and extent of jurisdiction, the territorial extent and the population, the amount, revenues, the number of officials, &c.

The principal speakers in this Section were MM. Jolles, Visschers, Yvernès, Worms, Van Hugenpoth, Newmarch, Heemskerk, Jacqemyns, &c.

In Section III, *Financial Statistics*, the following important questions were treated in the programme:—

a. *Statistics of the Survey of Land (Cadastre)*, by P. M. J. Bachiene.

b. *Credit Foncier*, by the same.

c. *Annual Revenue of the Nation*, by De Bruyn Kops.

d. *Statistics of Commercial Duties*, by J. De Bosch Kemper.

e. *Finances of Communes, of Territorial Districts, Signories, Corporations, &c.*, by H. Jacobi.

f. *Banks of Issue and other Institutions of Commercial Credit*, by J. F. Baert.

On the first of these, M. Bachiene proposed to the general assembly the programme of Florence, with certain amendments and simplifications, which have now been discussed, and urging on the Governments here represented to complete these statistics in the form proposed, but with perfect liberty to give such other details as may be obtained by the surveys completed to the present time; and, lastly, to make comparisons, by the aid of the statistical bureaux, of the conclusions in the programme, so far as they have their surveys finished in detail.

The second, on the report of M. Bachiene, repeated the desire expressed at the Congress of Florence, that the statistical bureaux should give the statistics of mortgages and public credit, to which, up to the present time, only the kingdom of the Netherlands had contributed any formal reply, and that the list of questions arranged in 1867 should be reprinted in the “*compte rendu*” of the present Congress.

To these it was proposed to add the following question, suggested by M. Pascal Duprat: “What is the mean ratio of the net “revenue of property mortgaged to the amount of the annuity “granted to the institutions of credit foncier to pay the annual “interest, the cost of administration, and the repayment of the “advance?”

As to the annual revenue of a nation, it may be readily supposed

the debate was of a very interesting character, and M. Vrolik (Holland), brought forward the report.

The Congress was invited to express the wish that the delegates of different countries, and especially the chiefs of the statistical bureaux, should communicate to the future Congresses the elements which their respective countries possessed, to arrive at the correct statistics of the revenue of the nation, either by the personal method of valuing each one's income, or by the actual process of estimating by the collective method the different branches of production. It was suggested that, by various amendments in the mode of collecting the statistics of trade, commerce, mining, and fisheries, the same accuracy might be obtained as is already found in some countries in agricultural statistics. It was especially desirable to give the details in such a form as to avoid the reduplication of the statistics constituting the revenue of a nation, by distinguishing the various elements of which they are composed, the primary materials, &c.

Lastly, it is important to discover the methods of ascertaining such revenues in countries in which, where the income tax does not prevail, they escape all investigation.

M. de Bouchen (Russia), presented the report on *commercial duties*, merely calling upon the Congress to approve the form of tables, and classification and details agreed to in the Section.

The report on *communal and provincial finances* was introduced by M. Castiglione (Italy), and concluded:—

(1) That in every country these accounts should be annually given in a form to facilitate comparison with those of the Government, so that the general receipts and expenditure of the country might be arrived at.

(2) That, if possible, the estimates as well as the actual expenditure should be published, avoiding repetitions and giving the details in the subdivisions now annexed.

(3) To add, in the first instance, the laws and regulations, the register and forms of the system of administration and financial organisation and showing in subsequent publications only the modifications made in these particulars.

(4) That in these budgets a comparison should be made with the general budgets of the State in similar branches.

(5) That a special chapter be devoted to the estimates and actual expenditure of the capital and great towns.

M. C. Juglar (France), read the report on the sixth question, recommending, for banks making advances, the periodical publication of the monthly and annual averages, distinguishing the advances on public bills, shares, merchandise, bullion and specie; for banks of deposit, the averages of the deposits repayable at sight

or at fixed periods; for banks of issue, the averages of circulation and metallic reserves; denoting how the averages are obtained, also the date of the maxima and minima amounts observed in each period.

The debates in this Section were carried on principally by MM. Wolowski, Mayr, De Bouchen, Bachiene, Duprat, Newmarch, Schreyer, Jonesco, Legoyt, Maestri, Heuschling, Valpy, Ficker, Engel, Juglar, Wirth, Baert, Thomson, Castiglioni, Jacobi, &c.

In Section IV, the questions discussed had more especial interest for Holland or for this country. They were:—

a. *Maritime Fisheries*, by M. J. T. Buijs.

b. *Statistics of Foreign Commerce*, by MM. P. N. Muller and Verkerk Pistorius.

The report on the first question was presented by M. Weschniakow (Russia), of which the conclusions were, that the Governments should give an annual report of the fisheries, both in rivers and lakes, distinguishing—

The description of fish, the nets or other machines employed, and their average cost; the period of the year for the fisheries; the number of individuals engaged; the actual produce of the year of each kind of fish; the quantity of each taken; and the average price, whether fresh, dried, or salted.

On the second question, M. Maestri (Italy), read the conclusions, which have a peculiar interest from the inquiries now being made by the Board of Trade into the defects of our existing system of commercial statistics, and the best mode of improving them. The resolutions were:—

1. That considering the doubts prevalent in several countries as to the quantities and values of the imports and exports, it is of great importance that the Governments should make a careful inquiry and ascertain the best means of ensuring accuracy in the returns.

2. That it appears from the discussion that in some countries the declarations given as to articles free of duty, are accepted without any check or any penalty for false statements; and it is suggested that effectual means should be taken to correct these defects by penalties, small duties, &c.

3. The classification and nomenclature of the tables of imports, exports, and goods in transit, should be submitted to a general revision so as to ensure as much as possible uniformity in the tables, to introduce simplicity, and similar subdivisions, and to provide for accuracy in these statistical returns in the interests of international commerce. For this purpose it is recommended that an International Commission be appointed, with special powers to

agree on the matter in question, in a similar way as has been done for postage and telegraphs.

4. That the Organisation Commission of the next Congress should consider the best means for fixing the value of imports and exports.

5. Similar defects are found in the movement of merchandise, published by the railway authorities, and require the same amendments to obtain uniformity in classification and nomenclature.

It is represented that the whole subject should be thoroughly discussed in the next Congress.

In this Section the principal speakers were MM. Block, Wirth, Maestri, Weschniakow, Kluge, Versmann, Ristorius, David, Van Beek Vollenhofen, Buys, &c.

It only remains to notice that in the Section V, *Statistics of European Transoceanic Possessions*, a very valuable historical and general account of the Dutch East Indian possessions, their management, and its results, is given in the programme. The various questions were debated by men of experience and local knowledge, and the conclusions submitted to and approved by the general assembly, were, on the report of M. Van Soest—

1. That the study of the means of collecting statistics amongst Hindoo and Musulmen nations is important, in order not to interfere with their sentiments and religious prejudices, which must be consulted in order to ensure the success of the censuses, or statistical inquiries ordered by the Government.

2. That in colonial statistics it is desirable to determine what degree of accuracy has been attained, and to avoid bringing together totals of different shades of truth, and in all cases to specify what probability of freedom from error belongs to the collection of facts.

3. That such statistics can only be attained by men skilled in European science, with the aid of native employés, specially engaged in this department, and that it is desirable that the Government should obtain a staff of such persons well paid and holding a good position.

4. In many colonial possessions, especially in Java, a registry of births, deaths, marriages, and migration of population, may be formed in each commune, in which one or more individuals can be found capable of keeping it properly, the natives in general being gratified at finding their names inscribed in the village register.

Lastly, the Section proposed that the following questions should form part of the programme of the next session of the Congress:—

1. What has been the number of the legal processes on the subject of land in British India before and since the promulgation

of the recent agrarian laws? and what during the same time was the number in the island of Java?

2. What are the causes of the increase or diminution of such processes?

3. What means can be employed for reducing the number of disputes as to land?

M. Van Soest concluded by hoping that, in the interests of humanity, the question of colonial statistics, in this Section now for the first time treated, should not be lost sight of in future discussions.

It is evidently a question of the highest importance to Great Britain and some other countries, and the treatment of the native populations of countries, acquired by conquest or otherwise, is a subject so wide that it can only be said to have been approached hitherto. The statistics under various heads have still to be gathered. The mode of obtaining them with sufficient accuracy, and having regard to native prejudices and tendencies to conceal the truth through fear or from established usage, requires the most careful consideration, and is beset with difficulties of a peculiar character, requiring all the ability of European skill and caution, and practical experience to overcome.

The discussions in the Fifth Section were principally carried on by MM. Thurlow, Van Hoogendorp, Veth, Van Soest, Lord Houghton, Van Swieten, Van Dedem, Quarles, Van der Vliet, Bleeker, Van der Gon Netscher, &c.

The last two days of the Congress were occupied by the general assembly, which met as on the first day in the Rittersaal, receiving the reports of the Sections. The conclusions were generally confirmed without further debate, but as some of the reporters introduced the subject by a brief statement of the case, or of the arguments on both sides, they proved interesting to a large audience. The Minister of the Interior, M. Fock, presided.

The question which gave rise to the most lively discussion, by Baron Van Hugenpoth, M. Pascal Duprat, and Dr. Bourdin, was that of mortmain. The resolutions as amended stood thus—

“The Congress considering that in the present state of Europe
“it is of the greatest importance to have as exact a knowledge as
“possible of the institutions of mortmain, urges upon the Govern-
“ments to prepare a comparative view of the legislation on this
“grave subject, and present the statistics of mortmain in all its
“forms.”

In all other respects the conclusions of the Sections were adopted without alteration.

After this business had been concluded, M. Visschers moved resolutions that a uniform system of weights and measures would

be of great advantage, and that those States which have not already introduced the *metric system*, should be urged to adopt it, as the one already largely in use, and the best suited to stimulate the progress of the people and encourage international relations. He also proposed that the Governments should be invited, by conventions, to hasten the acceptance of a general international monetary system. Dr. Engel said that the North German Confederation had already adopted the metric system, which would consequently come into use in the Customs Union of Germany. Dr. Mayr stated Bavaria had also passed it by a law of 29th April, 1869, and M. Balaguer that Spain had the system now in full force. After further support from various members, the Minister of the Interior promised that the decision of the assembly in its favour should be carefully attended to by the Bureau of the Congress.

Mr. Ruggles, of New York, then proposed that at the next Congress the statistics of agricultural products in all countries should be collected for the three years preceding the meeting, and presented to it. This also was agreed to.

Dr. Engel explained the plan of publication of international statistics before alluded to, and read out the names of the Delegates who, on behalf of their respective Governments, had undertaken their specified subjects. The conditions and mode of publication in the form of the first volume on population, prepared by MM. Quetelet and Heuschling, and the comparisons to be made not further back than 1853, when the first Statistical Congress was held were agreed to. Spain was added to the list of voluntary workers, and Mr. Ruggles, on the part of the United States, undertook that the statistics of American States should be produced in the same form.

On the previous day an important meeting, at which Mr. Newmarch, our President, acted as Chairman, had been called to discuss the very serious question proposed by Mr. Chadwick, of military economy. Whilst three millions of men are maintained in arms in Europe, at a cost of 280,000,000*l.* sterling of expenditure, they form a dead weight on the industry of nations, besides being a standing menace and incentive to war, whilst assumed to be merely necessary to maintain peace. How far this vast amount of physical force could be converted to its proper sphere—the increase of production, instead of living on the labour of the people, is a grand subject for the economist, and it was unanimously resolved and agreed to by the general assembly, after an eloquent speech by Mr. Chadwick, that each Government should be invited to give a *résumé* of military expenses and military statistics; in how many primary schools military exercises are practised; how many officers and soldiers have been engaged in civil productive works, and with

what results, &c., and that these details should be laid before the next Congress.

The next place of meeting was then discussed. M. Balaguer, on behalf of Spain, offered the hospitality of his country, and MM. Semenow, De Bouchen, Schreyer, and Weschniakow, in the name of the Government and people of Russia, gave a most cordial and pressing invitation to St. Petersburg. The decision was left to the Organisation Commission. The Congress concluded with appropriate speeches by Lord Houghton, MM. Semenow, Maestri, and Legoyt, expressing the grateful sense of the Foreign members for the attentions and cordial hospitality they had received.

It is difficult, in fact, in concluding this brief notice of the labours of the Congress to describe in adequate terms the honours and genuine good feeling which the Foreign delegates met with from every class. His Majesty the King gave a reception at the Hague, and the delegates were afterwards presented to the Queen, who, not content with this public display of interest in their useful labours, invited many of the members to entertainments at her palace. His Royal Highness the Prince of Orange also gave a reception. The Minister of the Interior and the Minister of Finance gave soirées. The Municipality of the Hague, literary unions, and private clubs offered dinners and musical treats. The town of Amsterdam, by its Burgomaster, welcomed them in the Industrial Exhibition, &c., and private hospitality was unbounded, amongst which that of M. von Baumhauer was conspicuous. Nor can the English delegates, whether official, or as representing science or scientific institutions, fail to remember the cordiality with which they were treated by Her Majesty's Envoy Extraordinary and Minister Plenipotentiary, Vice-Admiral the Honourable E. A. J. Harris, and by the Honourable T. J. H. Thurlow, one of the Secretaries of Her Majesty's Legation. Even the people assisted in doing honour to the Congress, and fêtes and illuminations, at which thousands of the people of the Hague were present, showed their personal interest in the labours of the Congress. This was a novel feature, and very suggestive, for it is evident that the object of statistics in eliminating the laws by which the social life and progress of a nation are governed, is to improve the condition of every class, to reduce pauperism to a minimum, to promote education, to introduce sanitary reforms, to encourage trade and commerce, in fact to carry out every research by which the character of a nation can be raised and its condition improved, and at the same time, by showing how nations are mutually dependent upon each other, and owe their success to the same laws of social progress, to make prosperity, goodwill, and peace everywhere take the place of misery, distrust, and war.

*On the HOUSE ACCOMMODATION of ENGLAND and WALES, with
REFERENCE to the CENSUS of 1871. By ROBERT HARRY INGLIS
PALGRAVE, ESQ.*

[Read before the Statistical Society, 21st December, 1869.]

CONTENTS :

	PAGE		PAGE
I.—Existing Information, Ex-		IV.—Estimates based on Mr. D.	
tent and Deficiencies	412	Baxter's Method	418
II.—The Increase in Houses not		V.—Information in Mr. Frazer's	
Proportionate to other		Report	421
Progress	414	VI.—Influence of Dwellings on	
III.—Information contained in		certain Districts.....	423
Census Returns, 1861	417	VII.—Summary	425

THE social condition of the population of this country has frequently been investigated by many and competent observers. Among other names, those of Arthur Young, Cobbett, Miss Martineau, Chalmers, Porter, and Kay Shuttleworth, show how great and how varied has been the ability employed in the task. All those just named may, in some degree, be termed amateurs. Each one noted, and remarked on, the points of special interest to himself. In more recent times carefully selected and highly qualified official observers have been appointed by the Government to the duty. Dr. Simon, Dr. Farr, Mr. Baker, and the Rev. James Frazer, to single out a few names, are worthy to be placed in the same line with the best known of their predecessors. To the reports made by such observers, the writer of the following pages has been greatly indebted. In acknowledging this obligation, he desires also to mention that a wish to give a complete authority for the statements made, has sometimes led him to avail himself of the very words in which the statement was given. In all practicable cases a reference has been added. But, although much information on many subjects connected with the condition of the population is to be gathered from these reports, and from other similar sources, to which, from want of space, it has been impossible to refer in detail, there is one rather important point on which our information is deficient. No adequate data yet exist for a complete and systematic investigation of the condition of the population, as to house accommodation, when regarded family by family.

To defer any attempt at investigation till this deficiency is supplied might be altogether undesirable. “An author who waits

“till all requisite materials are accumulated to his hands, is but “watching the stream that will run on for ever.” And though Mr. Hallam’s fame rests mainly on other grounds than ordinary statistical research, yet the social condition of the population was far from being forgotten by him; the early numbers of the Statistical Society’s *Journal* show that the house accommodation of the mass of the metropolitan population had not escaped his attention, or failed to call out his sympathy.

I.—*Existing Information, Extent and Deficiencies.*

The materials on most points are abundant. The only difficulty at first sight appears to be that of selection. Yet, as mentioned, there is a portion of the subject on which the information available is very scanty. The *quality* of the house accommodation of the United Kingdom, is as yet but scantily investigated. Existing statistics do not present any adequate information on this part of the question. The general average for the kingdom is given; the average for each county, each town, each village, is easily ascertainable. But here the information stops short. It is impossible to investigate further with any certainty, and to learn even approximately *how* individual families are housed. Endeavours have been made to unravel this point from the materials now accessible. And the results of some of these endeavours will be found in the following pages. But the best service which they can render is to show how little can yet be known.

And yet this subject is one of great interest. The important part which it plays in the social condition of the people cannot be doubted. But, as far as can be traced, while a vast expansion has taken place on many other points; while progress has been made in many other respects, house accommodation has remained almost stationary. Down to the present time it appears to have improved but slightly since the commencement of the century, even if there has been any real improvement at all since 1801. That date is not chosen for any other reason than because it is a convenient landmark, and the point whence authentic information on the subject commences. Before that time many ingenious estimates, like those of Sir William Petty* and the Rev. John Howlett,† were made, but these are at best uncertain grounds to base any calculation on; and no reliable data exist before the actual enumerations which commenced in 1801. It may, however, be observed in passing, that Mr. Howlett’s estimate of $5\frac{2}{3}$ as the average number of persons

* “Several Essays in Political Arithmetick,” by Sir William Petty, Knt.: London, 1755.

† “An Examination of Dr. Price’s Essay on the Population of England and “Wales,” by Rev. John Howlett, A.B.: Maidstone, 1781.

in a house, in 1780, was more favourable than the state shown to exist by the investigations of twenty years later. If Mr. Howlett's estimate was correct, the deterioration which followed 1780 may correspond with the depression in the condition of the labouring population of this country at the close of the last century, noticed by Mr. Porter,* by Mr. Rogers,† and commented on by that indefatigable observer Arthur Young.‡

Mr. Porter has made the following statement in the opening of the chapter on Inhabited Houses, in the "Progress of the Nation :—" "The number of houses in a district will usually bear the same "relative proportion to the number of its inhabitants at one period "that it has borne at another." This might certainly be expected to be the case where a country has passed into a stationary state. In a country in which the density of population, the relative proportion of wealth to individual inhabitants, of imports and exports, of all the circumstances which tend to form the life of a nation, remain unaltered. But is this similarity of proportion between the number of inhabitants and their dwellings to be expected to remain permanent in a society undergoing continual change? It may be said, the place where a man lives and the style of his house are both matters in which he is free to choose. That if more houses, that if a better class of houses were required, they would be provided. In short, that in this case the supply would be equal to the demand. Few, perhaps, of the current phrases in use among economic writers have been so frequently misinterpreted as those which refer to demand and supply. Few have been more frequently misapplied. It is assumed, as a matter of course, that the one will always be the correlative of the other. That, in short, the desire to possess any material object will not fail in fruition. The many cases in which a natural limitation to indefinite production exists, are quietly overlooked or ignored. A little reflection will show that houses are among the number of what are sometimes termed "excepted productions;" productions, in short, whose numbers are not governed by the ordinary rules which apply to most other things which can be increased in quantity at pleasure.

That a thing may have any value in exchange two conditions are needed. It must be of some use; and there must be some difficulty in its attainment. It is even possible that, however useful an object may be, the difficulty of attainment may be so great as to become a complete bar to possession.

* "The Progress of the Nation in its various Social and Economical Relations," by G. R. Porter: London, 1851.

† "A History of Agriculture and Prices in England, from 1259 to 1793," by James E. Thorold Rogers, M.A.: Oxford, Clarendon Press, 1866.

‡ "Annals of Agriculture," &c., Arthur Young: Bury St. Edmunds.

Mr. Mill, in the third book of his "Principles of Political Economy," has illustrated this point with the clearness of language usual to him. Houses, he shows, are within the scope of the limitation.

"The difficulty of attainment which determines value is not always the same kind of difficulty. It sometimes consists in an absolute limitation of the supply. There are things of which it is physically impossible to increase the quantity beyond certain narrow limits. Among such may be reckoned houses and building ground in a town of definite extent (such as Venice, or any fortified town, where fortifications are necessary to security), the most desirable sites in any town whatever."

Now "desirability" is a relative term;—nearness to the docks and the building yards, is as desirable to the labourer and shipwright, as nearness to the courts of law to the barrister and solicitor. And hitherto the mass of the population has had little power of choice in many instances, if there has been a choice at all between a desirable or an undesirable dwelling. There is little reason for doubt, but that if in many localities more houses had been available, more houses would have been occupied. It is true that the proportion of houses to inhabitants has slightly increased during the present century, but by no means in the ratio that might have been expected. A considerable increase might have been expected for three reasons. In the first place, the prosperity of the country has increased greatly. In the next, the burden of taxation is by no means so heavy as it was at the commencement of the century. In the third place, the incidence of that taxation bore very heavily on all building operations whatever. Bricks, tiles, timber, glass, were all subject to heavy dues; and the house itself, when built, had to bear special imposts, more onerous than those existing at present.

II.—*The Increase in Houses not Proportionate to other Progress.*

A complete survey of the social condition of the country, of the position occupied by its people, in comfort, in education and prosperity, would be of the greatest service and of general interest. The difficulties, however, of the task have apparently deterred any one since the death of Mr. Porter, from undertaking to investigate so vast a subject in as complete a manner. This is much to be regretted. A paragraph in one of Mr. Porter's prefaces shows that the writer felt that at no distant period his work must of necessity become out of date:—

"A book which professes to mark the progress of this United Kingdom, in which all the elements of improvement are working with incessant and unceasing energy, requires to be from time to

“time brought under revision, in order to the proper fulfilment of the object which it professes.

“It has been said that any work which should faithfully record the outward progress of England must partake of the nature of a *periodical*, so great are the changes which occur, and so rapidly are they found to succeed each other. This remark may be applied with peculiar propriety to the present time, in which the most zealous advocates of progress may see their hopes outstripped and their most sanguine wishes brought within the reach of accomplishment.”—*Preface to Second Edition of “The Progress of the Nation.”*

The space over which a general inquiry would have to extend has already greatly expanded since Mr. Porter’s death in 1852. And while Mr. Porter’s works retain the value always due to a series of complete and systematic observations, while they still form the most reliable basis of information on many subjects, a wide gap of necessity exists between the latest facts they supply, and the present day.

I therefore propose in this portion of my paper to avail myself of, and to continue the investigations contained in the chapter on “Inhabited Houses.”*

The average number of inhabitants to a house in England at each census in the present century was as follows :—

Average Number of Inhabitants to a House in England.

1801	5·67	1841	5·44
’11	5·68	’51	5·50
’21	5·76	’61	5·39
’31	5·62		

This table certainly gives reason for the belief that, as the excise on bricks was abolished in 1850, the timber duties reduced in 1851, and the window tax repealed in the same year, the effect of the removal of these drawbacks on building is, though dimly, reflected in the improvement shown by the later figures. And on a general view, the population of England was at the date of the last census slightly less crowded for house room than at the commencement of the century. But the advantage gained is only slight. It merely amounts to this, that the position of the population in regard to house room was not worse in 1861, than it was according to Mr. Howlett’s belief in 1780. This is certainly a far different result than might have been expected, if it is compared with the progress certainly made on many other points. It is also probable that this increase of the number of houses has rather benefitted the

* Chapter ii, section v, “Progress of the Nation.”

few than the many. If the condition of Middlesex as a county is investigated, a different result is shown.

Average Number of Inhabitants in a House in Middlesex.

1801	7·25	1841	7·59
'11	7·29	'51	7·88
'21	7·48	'61	7·90
'31	7·52		

A like tendency to a greater density of population exists in the case of London. But London, it may be argued, is a district, not a city with well marked boundaries. The case of Westminster, however, occupying a well-defined area, is not open to this objection; and shows the tendency to a greater crowding in a more marked degree.

*Average Number of Inhabitants to a House in Westminster.**

1821	9·84	1851	10·04
'31	9·79	'61	10·01

This table assists us to understand how little light a general average for the country may throw on the individual position of each inhabitant. Such overcrowding may, in particular instances, be the result of want among the local population. Westminster, it may be argued, has always contained many miserable dwellings within a stone's throw of magnificent mansions. Want may have had much to do with overpacking in Westminster. But this cannot be the case generally. The increased prosperity of the country during the last twenty years is well known. The exports and imports of the country are a sufficient test of this.

It may be urged that a larger foreign trade only proves the greater wealth among some classes, not among the population at large. The fact, however, that not only the absolute amount, but the proportion per head, are largely increased, would alone be sufficient to disprove this. It is certain also that the people generally have earned more money, and have been able to spend more money. They have not only bought more food, but food of a more expensive kind than they used to do.

The following table is derived from one by Mr. Lawes, inserted in Mr. James Caird's very careful paper on "Agricultural Statistics of the United Kingdom," in the Statistical Society's *Journal*, March, 1869, p. 65.

* "There are no data from which to calculate the proportion of inhabitants to "dwellings in the metropolis earlier than 1821."—G. R. Porter, Statistical Society's *Journal*, vol. iv, p. 283.

Estimated Consumption of Wheat per Head per Annum.

During the Last Sixteen Years.	England and Wales.	Scotland.	Great Britain.	Ireland.	United Kingdom.
	Bushel.	Bushel.	Bushel.	Bushel.	Bushel.
First eight years	5·9	4·2	5·7	2·7	5·1
Second „ „	6·3	4·2	6·0	3·3	5·5
Average of the whole period	6·1	4·2	5·9	3·0	5·3

“ Converting these figures into pounds, it appears that during “ the first eight years each person consumed at the rate of 311 lbs. “ of wheat, and during the last period 335 lbs.” Meanwhile the consumption of other articles of food than the staff of life, has largely increased. Taxation has been lighter, and, as previously mentioned, the taxes on building materials have been first lightened, and then removed.

Can it be doubted that if more houses had been obtainable, more houses would have been occupied? Can it be doubted that “ difficulty “ of attainment ” has limited and hindered the natural results of an increased demand? While the working classes have been earning more wages, have been spending more on food and drink and clothing, would they not gladly have obtained more house room, had they only been able to do so?

III.—*Information contained in Census Returns, 1861.*

I have endeavoured, but without avail, to extract from the census returns of 1861 some details as to the proportion of inhabitants to houses in different classes of the population. But I have been unable to frame any more exact statement of the proportion of inhabitants to houses in England than that given before. As previously stated, the needful statistics do not exist. The average at the census of 1861 was 5·39 persons to a house. That is to say, about 16 persons to three houses, taking England all round. This is the general average, but there can be no doubt that particular classes are by no means as well lodged. The instances of the different proportion of the increasing density of population in Middlesex and in Westminster probably point to this. Westminster, for more than forty years far beyond the average, increases more rapidly in density than Middlesex. By referring to the comparative statement of paupers relieved in the metropolis in the Christmas quarters for the years 1866-67, it appears that the increase in number in the western district (which includes the united parishes of Westminster) was 34·7 per cent. Metropolitan Middlesex, comparing 1st January, 1866-67, had only increased 26·7 per cent.—the

remainder of Middlesex but 6·9 per cent.* These figures confirm the natural belief that the poorer population has a tendency to a greater aggregation.

Tables 32, 33, and 39, given in the "Appendix to the Report on 'the Census of 1861,'"† appeared to promise at first sight the means of tracing the subject further. These tables give the total number of families to a house in fourteen selected subdistricts of England and Wales at that date. They show very clearly how great the variations in the distribution of the population are. The general average of these districts is 5·629 inhabitants to a house. This is but slightly higher than the general average for England and Wales (5·37). But the tables show that, covered by this general average, are great extremes, from 13·930 inhabitants to a house in St. Giles to 4·041 in a subdistrict in Cardigan. These subdistricts being the only ones reported on with such completeness, it occurred to me that it would be desirable to endeavour to ascertain some particulars respecting the rentals of the houses within their limits, and thus investigate the quality of the accommodation afforded to the inhabitants. This endeavour entirely failed, much to my regret.

Most of the subdistricts are merely portions of townships or parishes, and therefore it was impossible for me to obtain any more detailed information about them. In one only, Bury St. Edmunds, was the subdistrict exactly coincident in extent with the Parliamentary borough. I had hoped that a return made to the House of Commons in 1867 of population and rentals within the limits of each Parliamentary borough, would have been of service for the purpose of analysing to a certain extent the quality of the house accommodation in Bury St. Edmunds. But unfortunately for this purpose the principles advocated by Mr. Mill were not in favour with the framers of that return. Had the numbers of all householders been specified, some details would have been possible. But a limitation to "male occupiers" only, frustrated all efforts at a correct analysis.

IV.—*Estimates based on Mr. D. Baxter's Method.*

Though the census of 1861 does not give any basis on which to construct detailed statistics as to the country in general, it is possible to carry the investigation further in some directions. If we apply the principles of investigation adopted in Mr. Dudley Baxter's work‡ on the "National Income of the United Kingdom"

* "Nineteenth Annual Report of the Poor Law Board." London, 1867.

† "Census of England and Wales, 1861," vol. iii: London, 1863.

‡ "National Income of the United Kingdom," by R. Dudley Baxter, M.A.: London, 1868.

to this subject, some further insight may be obtained as to the distribution of the population among the various classes of dwellings. Mr. D. Baxter divides the population into what he terms the upper, and middle, and manual labour classes. In the upper and middle classes, he includes all persons with incomes from about 75*l.* a-year and upwards. In the manual labour classes are all working people, and others with incomes from about 73*l.* and downwards. The total population of England and Wales in 1861 was in round figures 19,900,000,* inhabiting 3,739,505 houses. Dividing the population on the principle named above, there would appear to have been then about

4,700,000 of the upper and middle classes, including those dependent on them.

15,200,000 of the manual labour class, with the same addition.

Mr. D. Baxter checks his figures by the number of 10*l.* houses in boroughs and counties of England and Wales in the electoral returns of 1866, which was at that time given as 1,250,000. And he considers that about 140,000 of them were occupied by the "manual labour classes." The annual rate of increase in houses appears to be far from uniform in this country: but we may suppose that 1,100,000 houses were occupied by the upper and middle classes in 1861, against 1,110,000 such houses in 1866. The "upper and middle classes" of Mr. D. Baxter's calculations are not, however, the only inhabitants of these houses. The larger proportion of servants, governesses, shop assistants, &c., must live with their employers.

The census of 1861 gives the number of these classes of persons, and it may be safely inferred that fully† 1,360,000 attendants, in some capacity or other, must be deducted from the "lower" and added to the "higher" classes, in the sense of forming part of the same households. With these alterations the figures will be as follows:—

6,060,000 "upper and middle classes," in 1,100,000 houses, 10*l.* and upwards, with their servants, &c.

13,840,000 "manual labour classes," in 2,639,505 houses below 10*l.*

The proportion of inhabitants to houses is very nearly equal in both of these two great divisions. But there can be no doubt that vast differences in actual fact lie beneath this apparent uniformity.

Following Mr. D. Baxter's method, the manual labour classes in 1861, would be distributed as follows:—

* "Besides 151,000 respecting whom nothing was ascertained."—D. Baxter.

† Summary Tables, XIX and XX, Census 1861, vol. ii.

	Persons.	Dependent.	Total.
CLASS IV.* Higher skilled labour and manufactures } (net annual earnings, 60 <i>l.</i> to 73 <i>l.</i>) }	1,065,600	1,123,400	2,189,000
CLASS V. Lower skilled labour and manufactures } (net annual earnings, 46 <i>l.</i> to 52 <i>l.</i>) }	3,616,000	3,922,800	7,538,800
CLASS VI. Agricultural and unskilled labour (net } annual earnings, 20 <i>l.</i> to 41 <i>l.</i>) }	2,681,700	2,790,500	5,472,200
	—	—	15,200,000

* The number affixed to each class refers to that by which it is designated by Mr. Baxter.

On p. 92 of the third volume of the Census of 1861, will be found a table distributing, by calculation, the number of inhabited houses into various classes; this table assigning to no less than 659,724 houses a rent of 3*l.* and under 5*l.* The lowest class on Mr. D. Baxter's list (No. VI), is that of agriculture and unskilled labour. The net annual earnings of the men in this class are estimated at from 20*l.* to 41*l.* May we take this class of labour to correspond with the 659,724 houses of the census table? Can we imagine men earning such low wages able to afford more expensive dwellings?

If we think they can *not*, and it is difficult to suppose they *can*, we shall find that this class, in 1861, numbered, including those dependent on the earners, about 5,472,200 persons. It is probable, however, that all these individuals might not require to be housed in the 659,724 dwellings.

A considerable reduction must be made for those servants who are the children of persons in this class, and who, being personal attendants, may, in the majority of cases, be reasonably conjectured to be housed by their employers. To arrive at the exact number is impossible, but a fairly approximate estimate may be made. The total number of personal attendants in 1861, probably so housed, was 1,360,000. It is also probable that most of them were the children of persons in Mr. Baxter's manual labour classes. The majority of domestic servants are in all likelihood derived rather from the upper than from the lower strata of the working classes. Assuming them, however, to have been evenly derived, as the numbers in Class VI form about five-fourteenths of the total in the manual labour classes, the corresponding proportion will be 485,710 persons; that is to say, it is probable that 485,710 individuals among the families in Class VI were, at the time of the census, servants in the houses

of persons in a superior station of life. To make this deduction is, of course, to assume that Class VI is consequently far less cramped for house room than as if all these persons remained with their parents and friends. Yet even supposing the 485,710 were all lodged elsewhere, and not in the houses which would appear to be their natural homes, the average density of the population to this class would be, under these the most favourable circumstances, more than 7·50 persons to a house; that house, be it remembered, being of a rental calculated at from 3*l.* to 5*l.* per annum, and giving a proportionately inferior accommodation. This would suppose a density of population in these cases half as much again, roughly speaking (house for house), as that of the upper classes, while the accommodation would probably be less than one-fourth the extent.

The writer would hardly have ventured to put forward this hypothesis, even though based on the figures given above, had not the information obtained in Scotland, at the census of 1861, enabled Mr. Caird to state, "that one-third of the population of Scotland "lived, each family, in houses of one room only, another third in "houses of two rooms; two-thirds of the whole people being thus "found to be lodged in a manner incompatible with comfort and "decency, as now understood."—*Statistical Society's Journal*, March, 1869, p. 75.

V.—*Information in Mr. Frazer's Report.*

Some information as to the state of matters in the rural districts of England is incidentally afforded in Mr. Frazer's* report on "The "Employment of Children, Young Persons, and Women in Agri- "culture." The details will be found in the Appendix, Part II, containing the evidence from the Assistant Commissioners. At p. 216, and also at p. 218, tables are given, stating the cottage population, and the number of cottages in various groups of rural parishes. The number of rooms in each cottage is likewise given. If the first group is taken, omitting the parish of Swaffham, which, being more a town than a country parish, can scarcely be included in the category, it appears that 2,527 people inhabit 566 houses, a proportion of 4·46 persons to each dwelling. The proportion at first sight appears quite a suitable one. It is considerably *below* the average of England and Wales generally. But if we look further, another and a very different state of things is found to underlie this totally unobjectionable exterior. The table gives no particulars of the number of families. If the number of persons in each family did not exceed the corrected proportion given in

* "Commission on the Employment of Children, Young Persons, and Women "in Agriculture, 1867." First Report of the Commissioners: London, 1868.

the third volume of the census of 1861—4·38 to a family—the 2,527 persons would constitute 576 families. For these 576 families there would be only 566 houses; ten, therefore, or the equivalent of ten, families being lodged with their neighbours. In this respect again the housing of these persons is considerably better than the average of England and Wales, “twelve families to ten houses.” “Census 1861, Report,” vol. iii.

But the families themselves would be very differently and unequally lodged:

123	families having cottages with	one bedroom.
323	„	two bedrooms.
130	„	three „

Or, taking the number of persons—

540	in cottages with one bedroom,	about one-fifth.
1,418	„ two bedrooms,	„ three-fifths.
569	„ three „	„ one-fifth.

This proportion is more favourable than that of Scotland, according to Mr. Caird; but it shows how many persons are but indifferently lodged, under an average which appears at the first glance to show an unusually favourable condition.

The second group of parishes, described on p. 218, differs slightly from the one first investigated. It includes fifteen parishes, with a cottage population of 4,751 persons, occupying 1,031 houses. The general average is 4·60 to a house. This, though higher than the last quoted, is yet considerably lower than the general average for England. There would appear on analysis, however, to be 1,085 families (or their equivalents) to 1,031 houses. These families would, if equally apportioned, be distributed thus:—

251	with one bedroom.
691	„ two bedrooms.
143	„ three „

Or, taking the number of the individuals—

1,100,	about one quarter,	in cottages with one bedroom.
3,026,	„ five-eighths	„ two bedrooms.
625,	„ one-eighth	„ three „

Further particulars of these families, in both groups, will be found in the Appendix to Mr. Frazer's Report. It will be observed that these two groups are exclusively rural parishes; that they are not selected instances; that the tables exclusively refer to the cottage population alone; and that, though in neither case the proportion of individuals with but one bedroom is as low as

Mr. Caird's, in neither does the proportion of those with more than two rise as high as that which he gives for Scotland.

VI.—*Influence of Dwellings on certain Districts.*

It may be desirable to endeavour to ascertain how far the state of the house accommodation in various neighbourhoods is reflected in the condition of the inhabitants. Many individual instances of the prejudicial effect of a low class of dwelling have been recorded, but it is difficult to exhibit the results in a tabular form. Professor Leone Levi,* in his report to Mr. Bass on the wages and earnings of the working classes, has collected a vast deal of information on many collateral subjects. A table is given at p. 10 of that work, "illustrative of the connection which exists between the different occupations and house accommodation, education, health, and drunkenness, and the following is a general summary of the information contained under each branch of occupation."

Industrial Districts.	Rent of Houses in Parliamentary Boroughs.			Education. Signatures by Marks in the Marriage Register.†		Drunken- ness.‡	Mor- tality.‡
	Under £7.	£7 to £10.	£10 and Upwards.	Males.	Females.		
	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.	Per cnt.
England and Wales	30	17	53	23	32	0·50	2·38
Cotton districts	58	18	24	26	57	0·80	2·63
Woollen „ 	65	9	26	23	51	0·92	2·71
Silk „ 	48	26	26	19	37	0·47	2·31
Hosiery „ 	45	23	32	24	34	0·45	2·91
Colliery „ 	66	16	18	34	47	0·56	2·61
Earthenware districts	60	13	27	35	45	1·02	2·61
Metal districts	67	16	17	32	48	1·07	2·69
Iron mining districts....	41	50	9	48	64	0·67	2·99
Hardware districts.....	33	34	33	29	43	0·46	2·82
Cutlery „ 	56	18	26	22	36	0·53	2·78

† From the "Report of the Registrar-General of Births, Deaths, and Marriages for 1864."

‡ Proportion of persons proceeded against for drunkenness in 1865, from the "Report on Judicial Statistics, 1866."

The table will show the effect produced by the quality of house accommodation on the various populations more distinctly, if it is

* "Wages and Earnings of the Working Classes; with some Facts illustrative of their Economic Condition, drawn from Authentic and Official Sources, in a Report to Michael T. Bass, Esq., M.P.," by Leone Levi: London, 1867.

rearranged according to the proportion of the poorer householders to the rest of the community.

Industrial Districts.	Rent of Houses in Parliamentary Boroughs under £7.	Drunkenness.	Mortality.	Marks.	
				Men.	Women.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Hardware districts.....	33	·46	2·82	29	43
Iron mining „	41	·67	2·99	48	64
Hosiery „	45	·45	2·91	24	34
Silk „	48	·47	2·31	19	37
Cutlery „	56	·53	2·78	22	36
Cotton „	58	·80	2·63	26	57
Earthenware „	60	1·02	2·61	35	45
Woollen „	65	·92	2·71	23	51
Colliery „	66	·56	2·61	34	47
Metal „	67	1·07	2·69	32	48

When thus rearranged the districts may be divided into two groups of five districts each, with the following results:—

	£7 Houses.	Drunkenness.	Marks.	
			Men.	Women.
	Per cent.	Per cent.	Per cent.	Per cent.
First group	33 to 56	·51	28	42
Second „	58 „ 67	·87	30	49

The rate of mortality does not exactly follow the same proportion. It is nearly equal in both groups, being slightly higher in the first group. In both divisions the average is greatly beyond that of the United Kingdom generally. Dr. Farr's observations on the relation of density of population to the standard of health are most instructive. They are, however, so well known, that it is not needful to do more than refer to them here.

The average rate of wages, according to Professor Levi, is lower in the first of these groups than in the second. The more poorly paid portion of the population in these contrasted districts has been, therefore, on the average, willing to pay the higher rent, is the less drunken, and the better educated.

The table given immediately above arranged the industrial districts commented on by Professor Levi according to the relative proportion of houses in Parliamentary boroughs under 7*l*. If the houses rented from 7*l*. to 10*l*. are combined with these, the arrangement is slightly altered. The “earthenware” district is found in the group with fewer small houses. The “iron mining” district takes its place in the lower group.

The general results are as follows :—

	£7 to £10 Houses.	Drunkenness.	Marks.	
			Men.	Women.
	Per cent.	Per cent.	Per cent.	Per cent.
First group	67 to 74	·58	25	36
Second „	74 „ 91	·80	32	54

The rate of mortality is slightly lower in the first of these groups than in the second.

Whether the poorest class of houses is taken by itself, or that immediately superior in condition is combined with it, in either case it appears, according to these tables, that a population, whether earning good wages or not, if poorly lodged, will likewise be at a low ebb of education, morality, and health.

VII.—*Summary.*

The preceding remarks have been restricted as closely as possible to the main subject. It is obvious that in many places a vast amount of inequality may and does underlie a general average which appears to imply no marked disproportion between the numbers of the people and their dwellings. It is obvious, also, that the increase in houses since the commencement of the century has but slightly exceeded the increase of the population, and has not kept pace with the progress in other respects. Some facts have been mentioned which show that the quality of the house accommodation of particular districts, has impressed its mark on the population of those districts. That a portion of the population, at least as well off as another portion in most respects, inferior only in the quality of its dwelling places, is at a lower level in education and morality in proportion to that inferiority. More instances might be readily given.

There is in the metropolis alone a population equal in numbers to the inhabitants of many large towns, whose house accommodation is anything but satisfactory. Dr. Hunter's report of 1866 states :
“ First, that there are about twenty large colonies in London, of
“ about 10,000 persons each, whose miserable condition exceeds
“ almost anything he has seen elsewhere in England, and is almost
“ entirely the result of their bad house accommodation ;—and
“ secondly, that the crowded and dilapidated condition of the houses
“ of these colonies is much worse than was the case twenty years
“ ago.”*

* “ Eighth Report of the Medical Officer of the Privy Council.” London, 1866.

The large colonies alone are mentioned here; to take the smaller examples at half of the large, is probably to understate their amount, adopting that calculation it amounts to this, that the reason of one-tenth of the population of London being miserable and in want, is their "bad house accommodation." It is true that private liberality has done much since that date, but it is probable that the condition of these particular districts is not much ameliorated. Nor is the country at large free from this misfortune, as shown by the statistics given from the appendix to Mr. Frazer's report, and many pages might be filled from the remarks of highly qualified observers.

It is so usual to regard the course of events in this country as one of continued progress, that it requires some little effort to realize that the progress, though great, has been far from uniform. The history of the social condition of the population shows many variations, frequently continued over long periods. If even no greater a length of time than the last century and a half is examined, it will be found to contain many alternate successions of welfare and of want. "The period of fifty years, from 1715 to 1765, "was characterised by a marked exemption from seasons of scarcity, "compared with the fifty years preceding."* This "exemption "from seasons of scarcity" was accurately marked in the condition of the people; so was the entirely opposite character of the years 1765-75. From the latter date to 1792 the seasons appear to have been irregular. The twenty years, 1795-1815, were a period of great depression. Since that date there has been much improvement, followed by a check in quite recent years. But it is impossible to compare the Great Britain of 1869 with that of 1765, otherwise than in the most general way, in these points. If modern legislation has done much to alleviate the distress inevitable on a series of "seasons of scarcity," it must be remembered that enlarged facilities in other respects, and, foremost, increased freedom of locomotion, will for the future exercise a great influence at all periods of depression. Emigration at such times must be looked for. And it is possible that the time may not be far distant when emigration may no longer be looked on as a panacea for all distress. Meanwhile it is scarcely likely that the active, the intelligent, the pick of the population, will be retained, unless they can obtain in this country those comforts which decent accommodation in house room alone can afford.

The question also suggests itself, may not the generally indifferent house accommodation of the working classes, be a main reason why the prosperity of the last few years has left so few

* "A History of Prices, and of the State of the Circulation from 1793 to "1837," &c., by Thomas Tooke: London, 1838.

permanent results? There can be no doubt that the population at large earns larger wages than twenty or thirty years ago. But the improvement in house accommodation has not kept pace with improvement in other respects, though it is probable that the outlay in the shape of rent forms at least as large a proportion of the general out-goings now as at an earlier date. The great increase in pauperism since 1866 shows a lamentable want of thrift among the wage-earning classes. May not a deficiency of respectable homes prevent the formation of thrifty habits? What may be termed the moral evidence on the subject is abundantly provided by the reports of Mr. Frazer, Mr. Baker, and Dr. Simon. The statistical evidence is now required, and it is clear that no sufficient data yet exist, on which to ground any satisfactory investigation.

This information might without difficulty be obtained at the census of 1871. There would be no need to go into details so minute as to cause great additional outlay. A strict yet simple definition of a house is not easily arrived at, but without requiring statements which it might be inconvenient to give, much valuable information might be obtained. To inquire whether each family inhabited one, two, or more rooms would be sufficient for the purpose, nor would it be needful to specify any larger number than two. It would be sufficient to assimilate the householder's schedules for England and Wales with those of Scotland, of 1861, on this point.

Should the cost of the investigation be thought a hindrance, I may mention that I understand the expense of the Scotch census of 1861, when this point was first inquired into, was, through careful management, reduced below the cost in 1851.

The desirability of a closer inquiry into the state of house accommodation in this country was noticed both in Mr. Caird's paper, previously referred to, and in that of Mr. Welton. The President in his inaugural address of this session, deprecated, for obvious reasons, any material departure from the precedents of 1851 and 1861. The inquiry now proposed can hardly be objected to on this score; while the information it would afford, might materially assist in diminishing the waste of "energy, intelligence, and life," to which Mr. Newmarch eloquently referred at the close of his paper.

The COTTON TRADE of the UNITED KINGDOM, during the SEVEN YEARS, 1862-68, as compared with the SEVEN YEARS, 1855-61; with REMARKS on the RETURN of FACTORIES existing in 1868.
By ELIJAH HELM.

[Read before the Manchester Statistical Society, 14th April, 1869.]

FROM the very opportune paper contributed by Mr. Helm to the Manchester "Transactions" we obtain the following passages and tables:—

"The blockade of the Southern ports was effected in the month of July, 1861. From that time the American Cotton field was practically closed for four years. Fortunately, the crop of 1860-61—the largest ever grown in the United States—had already been shipped, and was safely housed in the ports of the consuming countries. The existence of this stock, and the doubts then widely entertained of a long continuance of the war, kept prices of cotton comparatively low until nearly the end of 1861. I have, therefore, in the tables appended to my paper, and in the comparisons drawn from them, considered the year 1861 as too little affected by scarcity to belong to the famine period.

"There remain then seven years, from January, 1862, to December, 1868—years of scarcity and abnormal prices—which I propose to review, comparing them with the seven years immediately preceding, namely—from January, 1855, to December, 1861.

"The effects of the war upon the cotton trade were felt mainly in three ways:—in the opening up of new and extended sources of supply; in an enormous rise of price; and in a diminished use of cotton fabrics, accompanied by an enlarged use of Woollen and Linen goods.

"From nearly the beginning of this century to the year 1861, the United States were the chief source of European cotton supply. As regards this country, American cotton constituted, in 1860, 85 per cent. of our whole imports. In 1862—the first famine year—we received but 4 per cent., and that proportion reached us either through Mexico or the blockaded ports; and, in 1868, we still derived only 43·38 per cent. from the United States. Taking a wider view, we find that during the years 1855 to 1861 that country contributed 75·05 per cent. of our imports, and during 1862 to 1868 only 28·19 per cent.

"The order in which the chief contributories stood during the two periods is:—

Countries.	1855-61.	1862-68.
	Per cent.	Per cent.
United States	75·05	49·26
East Indies	18·92	28·19
Egypt	3·24	10·79
Brazil	1·95	5·38
Mediterranean countries (except Egypt)	·02	2·29
China and Japan	·01	1·30
Other countries	·81	2·79
	100·	100·

“ We now come to examine the course of prices during the period under review. From the time that the cotton manufacture began to assume important dimensions, the greatest confidence has been felt in its stability and progress. But it was always supposed that its existence on a large scale was entirely dependent upon the *low price of the raw material*. Now, what have the last seven years taught us on this point ?

“ Taking the average prices of 1855 and 1864, the lowest and highest during the past fourteen years, we find as follows :—

Particulars.	1855.	1864.	Per Cent.
	<i>d.</i>	<i>d.</i>	Increase.
Price of Mid. Orleans	5·76	27·68	380
Cotton consumed in the United Kingdom }	839 mln. lbs.	574 mln. lbs.	Decrease. 32

“ That is to say, there was in 1864 a demand for two-thirds as much cotton as in 1855, although the price was nearly *fivefold* greater.

“ Comparing now the price and consumption of the two septennial periods, we have the following results :—

Particulars.	1855-61.	1862-68.	Per Cent.
	<i>d.</i>	<i>d.</i>	Increase.
Average price of Mid. Orleans	7·08	18·29	158
Cotton consumed per ann. in U. K.	932 mln. lbs.	730 mln. lbs.	Decrease. 22

“ It would thus appear that during 1862-68, with prices more than *two-and-a-half* times those of 1855-61, there was a decrease of less than *one-fourth* in the demand.

“ These figures appear to show the inherent strength and soundness of the cotton trade, resting as it does on its proved necessity to mankind. Few raw products, excepting wheat, could have shown, in the relation between scarcity and price, so complete a hold upon the wants of the race.

“It may, however, be urged, that at least the price of cotton must be low, as compared with the other raw materials of clothing fabrics, in order to ensure a large demand. But we find that the advance in the prices of flax and wool during the cotton famine was really very limited, in proportion to the rise in cotton. For whilst the latter, during the years 1862-68, averaged 158 per cent. higher than during 1855-61, Flax and Hemp were but 10 per cent., and Wool $24\frac{1}{2}$ per cent. dearer. It is true that the prices of these two commodities were kept comparatively low by an opportune increase in their supply. On this account they became, in the colder climates especially, most formidable competitors with cotton. But the large quantities which were consumed during the Cotton famine only serve to make still more significant the great consumption of Cotton, at prices so much enhanced.

“The following figures give some idea of the extent to which Cotton has been replaced since 1861:—

Periods.	Average Number of Acres under Flax in Ireland.	Average Imports of Foreign Flax, Hemp, and Jute, into U. K.
1855-61	115,083	cwts. 3,076,564
'62-68	234,357	4,337,982
Increase	119,274	1,261,418

“It will now be desirable to touch upon some of the more salient features in the trade in cotton manufactures, during the seven years under review. And here the first thing that strikes one is that, as the capital sunk in Mills and Machinery on the outbreak of the war could not be withdrawn, there has been throughout 1862-68, a keen competition for the privilege of manufacturing the limited amount of cotton forthcoming. The margin for producing Goods has, therefore, been kept at a low and sometimes unremunerative point. But the goods produced have, nevertheless, been consumed at very high prices; and, until the last twelve months, stocks have been light throughout the world.

“The course of prices of *grey shirtings* may be taken as a standard, and the following will indicate the *average advance* of 1862-68 over 1855-61.

Periods.	Average Price of Best 39 in. Shirtings, 16 × 15 = 8 lbs. 4 oz.		
	s.	d.	
1855-61	8	8	per piece
'62-68	15	$5\frac{1}{2}$	„
Advance = 78·3 per cent.	6	$9\frac{1}{2}$	„

“Briefly, the chief influences affecting the demand for cotton goods during 1862-68 may be stated to be:—

(1.) “That the *Home demand* has been lessened by the compe-

tition of Linen and Woollen goods, and by the distress prevailing in the manufacturing districts from 1862 to 1865, as well as by the high prices of Wheat in 1867 and 1868, and the general depression following the panic of 1866.

(2.) “That the *foreign demand* has been enhanced by the wealth poured into the new cotton fields; and by the large amount of capital consumed in railways and other reproductive works abroad, during the ‘extension mania’ preceding the panic of 1866.

(3.) “That in some of our foreign markets, linen and woollen goods have, as at home, taken the place of cotton. The average quantities of the three great textile fabrics exported per annum from the United Kingdom during the last two septennial periods illustrate this.

Cotton, Linen, and Woollen Manufactures Exported from United Kingdom.
—Average Annual Quantities and Values, 1855-61 and 1862-68.

Manufactures.	Quantities.				Values.			
	1855-61.	1862-68.	Difference.		1855-61.	1862-68.	Difference.	
			More.	Less.			More.	Less.
	Mln. yds.	Mln. yds.	Per cent.	Per cent.	Mln. £	Mln. £	Per cent.	Per cent.
Cotton	2,311,	2,219,	—	3·9	34,29	46,28	35	—
Linen	131,	210,	60·2	—	4,41	7,58	72	—
Woollen	169,	245,	45·2	—	10,43	18,39	76	—
					49,13	72,25		

The increase in the Linen and Woollen Trades presented by these figures is most striking, and goes far to explain the comparative ease with which the country has borne the paralysis of the Cotton industry.

This view is rendered the more certain when we consider the results presented by the Return of Factories in 1868 (Table A), as regards the number of persons employed in Cotton, Woollen, and Flax manufactures in 1856, 1861, and 1868.

Thus:—

Persons Employed as below—United Kingdom.

Year.	Cotton.		Woollen, &c.		Flax, &c.		Total.	
	No.	Per cent. Increase.	No.	Per cent. Increase.	No.	Per cent. Increase.	No.	Per cent. Increase.
1856....	379,000	—	166,000	—	80,000	—	625,000	—
'61....	451,000	19·0	173,000	4·2	94,000	17·5	718,000	14·9
'68....	401,000	—11·1	253,000	46·2	135,000	43·6	789,000	9·9

The Return of Factories in United Kingdom in 1868, as compared with the similar return of 1856 and 1861, gives the following results:—

“The number of Cotton mills given in the return for 1868 is 338 less than in that for 1861. The decrease comes under the following heads:—

Factories employed only in spinning.....	51
“ “ “ weaving	81
“ “ in spinning and weaving	48
“ not included in either of these descriptions (probably sizing, &c., &c.).....	158
	<hr/>
	338

“The number of *Spindles* in 1868 exhibits an aggregate increase of 1,615,537. Several districts show a diminution, the following being the chief:—

Scotland, showing a decrease of 517,852 spindles	
Cheshire, “ 375,033 “	
Derbyshire, “ 139,114 “	
Yorkshire, “ 38,381 “	
Nottingham, “ 29,708 “	

“The Counties which return the largest increase of Spindles are:—

Lancashire, an increase of 2,630,423 spindles	
Warwickshire, “ 51,464 “	

“The decline of cotton spinning in Cheshire and Derbyshire has concurred with a large increase there, in the number of Woollen and Worsted spindles employed; and in Scotland with an increase of nearly 100 per cent. in the number of looms weaving flax, hemp, and jute. It may, therefore, be considered probable, that some mills in these districts have been converted from cotton to the other textile manufactures.

“The number of *Cotton Looms* in the United Kingdom, returned in each of the years under comparison, is:—

In 1861	399,992
“ 1868	379,329
	<hr/>
Showing a decrease of	20,663

“The greater part of this decrease, viz., 13,443 looms, occurs in the county of Lancaster.

“It would appear that no account has been given in the returns of the number or capacity of the cotton mills now standing *empty*; but in any *complete* estimate of the consuming power of the United Kingdom, this item ought not to be excluded. Several large new mills are ready to receive machinery, as soon as there are signs of a steadily profitable trade; and should any unusual prosperity visit the cotton manufacturing districts, there can be no doubt that many old mills, now silent, would be quickly filled with machinery and set to work.

“The evidence of recent rapid growth in the Woollen and Linen industries of this country, afforded by the statistics of raw materials imported, and manufactures exported, is fully sustained by a comparison of the machinery returns of 1868 and 1861. The particulars are as follows:—

	Spindles.	Looms.
<i>Woollen, &c., Factories—</i>		
In 1868	6,455,879	118,865
„ '61	3,471,781	64,818
Increase	2,984,098	54,047
„ per cent.	86	83·3
<i>Flax, &c., Factories—</i>		
In 1868	1,679,357	35,047
„ '61	1,252,236	15,347
Increase	427,121	19,700
„ per cent.	34·1	128·3

“There is, however, reason to believe that, at least as regards the Flax manufacture, the increase is for the present arrested. The following figures, representing its condition in Ireland, in January of the several years stated, have been compiled by the Belfast Linen Trade Committee:—

Abstract of Return of Flax Spinning Mills in Ireland, compiled from Information derived (save in a very few instances) from the Proprietors direct.

	Mills.	Spindles Employed.	Spindles Unemployed.	Total Spindles.	Proposed Extension.
					Spindles.
1859	82	560,642	91,230	651,872	—
'64	74	641,914	8,860	650,774	50,638
'66	86	759,452	11,362	770,814	103,792
'68	90	841,867	60,439	902,306	15,032

Abstract of Return of Linen Power Loom Factories in Ireland, compiled from Information derived (save in a very few instances) from the Proprietors direct.

	Mills.	Looms Employed.	Looms Unemployed.	Total Looms.	Proposed Extension.
					Looms.
1859	28	3,124	509	3,633	—
'61	35	4,609	324	4,933	—
'64	42	7,929	258	8,187	1,685
'66	44	10,538	266	10,804	6,484
'68	66	11,087	4,130	15,217	996

APPENDIX.

(A).—*Parliamentary Return of Factories Employed in the Three Great Textile Manufactures of the United Kingdom, in the Years 1856, 1861, and 1868.*

Particulars.	Number of Factories.			Number of Spinning Spindles.		
	1856.	1861.	1868.	1856.	1861.	1868.
COTTON FACTORIES.						
England and Wales ...	2,046	2,715	2,405	25,818,576	28,352,125	30,478,228
Scotland	152	163	131	2,041,129	1,915,398	1,397,546
Ireland	12	9	13	150,512	119,944	124,240
<i>United Kingdom ...</i>	<i>2,210</i>	<i>2,887</i>	<i>2,549</i>	<i>28,010,217</i>	<i>30,387,467</i>	<i>32,000,014</i>
WOOLLEN, WORSTED, & SHODDY FACTORIES.						
England and Wales ...	1,793	1,968	2,211	2,798,275	3,092,376	6,045,049
Scotland	204	201	207	293,362	356,131	385,246
Ireland	33	42	47	19,884	23,274	25,584
<i>United Kingdom ...</i>	<i>2,030</i>	<i>2,211</i>	<i>2,465</i>	<i>3,111,521</i>	<i>3,471,781</i>	<i>6,455,879</i>
FLAX, HEMP, AND JUTE FACTORIES.						
England and Wales ...	139	143	155	441,759	345,192	448,909
Scotland	168	192	169	278,304	312,239	331,151
Ireland	110	105	148	567,980	594,805	899,297
<i>United Kingdom ...</i>	<i>417</i>	<i>440</i>	<i>472</i>	<i>1,288,043</i>	<i>1,252,236</i>	<i>1,679,357</i>

Particulars.	Number of Power Looms.			Number of Persons Employed.		
	1856.	1861.	1868.	1856.	1861.	1868.
COTTON FACTORIES.						
England and Wales ...	275,590	368,125	344,719	341,170	407,598	357,052
Scotland	21,624	30,110	31,864	34,698	41,237	39,809
Ireland	1,633	1,757	2,746	3,345	2,734	4,203
<i>United Kingdom ...</i>	<i>298,847</i>	<i>399,992</i>	<i>379,329</i>	<i>379,213</i>	<i>451,569</i>	<i>401,064</i>
WOOLLEN, WORSTED, & SHODDY FACTORIES.						
England and Wales ...	52,535	63,312	115,122	155,820	159,281	233,535
Scotland	800	1,383	3,528	10,175	12,728	18,174
Ireland	64	123	215	890	1,037	* 1,347
<i>United Kingdom ...</i>	<i>53,399</i>	<i>64,818</i>	<i>118,865</i>	<i>166,885</i>	<i>173,046</i>	<i>253,056</i>
FLAX, HEMP, AND JUTE FACTORIES.						
England and Wales ...	1,987	2,161	5,530	19,787	20,474	24,949
Scotland	5,011	8,520	15,828	31,722	39,562	52,639
Ireland	1,691	4,666	13,689	28,753	33,967	57,745
<i>United Kingdom ...</i>	<i>8,689</i>	<i>15,347</i>	<i>35,047</i>	<i>80,262</i>	<i>94,003</i>	<i>135,333</i>

* As given in the return for 1868, the number of persons employed in the woollen, &c., manufacture in Ireland, is 10,555. This is an obvious error, and I have corrected it by estimating the number of persons employed, on the basis of the number of spindles and looms given in the return.

The total numbers of persons employed appear to be:—

Cotton	380,000 in 1856	451,000 in 1861	401,000 in 1868
	246,000 „	267,000 „	388,000 „
Woollen, &c.	626,000 in 1856	718,000 in 1861	789,000 in 1868

(B).—Quantities, Values, and Values per Pound of Cotton Yarn; and Quantities, Values, and Values per Yard of Cotton Piece Goods EXPORTED to East India and China.

[The 0,000's, unit figures are omitted, thus 31,80 = 31,800,000.]

Years.	Yarn.			Piece Goods.		
	Million Pounds.	Value in Million £.	Value per Pound.	Million Yards.	Value in Million £.	Value per Yard.
			d.			d.
1855.....	31,80	1,37	10·4	541,40	5,88	2·6
'56.....	31,01	1,38	10·8	590,61	6,78	2·7
'57.....	23,49	1,30	13·4	591,54	7,28	3·0
'58.....	43,12	2,24	12·5	930,02	11,12	2·9
'59.....	53,20	2,97	13·4	1,162,35	14,79	3·0
'60.....	39,48	2,22	13·6	1,048,04	13,67	3·1
'61.....	31,38	1,82	14·0	1,041,50	13,19	3·0
1862.....	21,27	1,66	18·7	595,69	9,33	3·8
'63.....	25,54	3,12	29·3	606,27	12,87	5·0
'64.....	19,64	2,59	31·4	550,34	13,35	5·8
'65.....	16,31	1,74	25·5	688,75	13,89	4·9
'66.....	27,13	2,85	25·2	819,47	17,00	5·0
'67.....	35,39	2,78	18·9	972,40	16,50	4·0
'68.....	34,13	2,46	17·3	1,251,95	18,76	3·5
Average, 1855-61	36,21	1,90	12·6	843,64	10,39	2·9
„ '62-68	25,63	2,46	23·6	783,55	14,53	4·5
Increase per cent.	—	29·	87·3	—	39·8	55·
Decrease „	29·2	—	—	7·1	—	—

Note.—In addition to the above, large exports of cotton manufactures have, during the past four years, been made to India, viâ Alexandria. No separate account of them has been given by the Board of Trade, which has included them in the exports to Egypt. I am able to state, that in 1867, about 230,000,000 yards of goods, and about 3,200,000 lbs. of yarn, were sent to India through Egypt; and in 1868, about 120,000,000 yards of goods, and about 1,600,000 lbs. of yarn.

(C).—Quantities, Values, and Values per Yard, of Cotton Piece Goods Exported to the United States of America.

[0,000's omitted, thus 184,58 = 184,580,000.]

Years.	Million Yards.	Value. Million £.	Value per Yard.	Years.	Million Yards.	Value. Million £.	Value per Yard.
			d.				d.
1855.....	184,58	3,15	4·1	1862.....	97,72	1,84	4·5
'56.....	207,28	3,77	4·4	'63.....	71,60	1,61	5·4
'57.....	177,84	3,07	4·1	'64.....	64,14	1,67	6·3
'58.....	154,81	2,61	4·1	'65.....	122,38	3,01	5·9
'59.....	225,14	3,99	4·2	'66.....	114,74	3,29	6·8
'60.....	226,65	3,84	4·1	'67.....	88,48	2,23	6·1
'61.....	74,68	1,25	4·0	'68.....	74,82	1,85	6·0
Average, 1855-61	178,71	3,10	4·1	Average, 1862-68	90,56	2,22	5·8
Increase per cent.	—	—	41·5	Decrease per cent.	49·3	28·3	—

(D).—Average Price of Middling Orleans, and Fair Dhollerah Cotton, and 39 in. Shirtings, for each Year, from 1855 to 1868.

Years.	Middling Orleans.	Fair Dhollerah.	Best 39 in. Shirtings, 16 × 15. 8lbs. 4 oz.	
	d.	d.	s.	d.
1855.....	5·76	4·05	7	3 ¹ / ₄
'56.....	6·36	4·86	7	11
'57.....	7·82	5·39	8	10 ³ / ₄
'58.....	7·00	5·50	8	—
'59.....	7·00	5·26	9	6 ¹ / ₂
'60.....	6·56	4·35	9	6 ¹ / ₄
'61.....	9·06	6·31	9	5 ³ / ₄
1862.....	19·17	12·32	13	8 ³ / ₄
'63.....	24·35	19·59	18	11
'64.....	27·68	21·14	21	3 ³ / ₄
'65.....	19·50	14·72	16	8 ¹ / ₂
'66.....	15·78	11·95	15	3 ³ / ₄
'67.....	10·84	8·53	11	6
'68.....	10·75	8·50	10	9
Average 1855-61	7·08	5·10	8	8
„ '62-68	18·29	13·82	15	5 ¹ / ₂
Increase per cent.	158·3	171	78·3	

(E).—Quantities of Flax, Hemp, Jute, and Wool, Imported into the United Kingdom; together with the Number of Acres under Flax in Ireland.

[In cols. 2, 3, 4, and 5, the 000's are omitted, thus 728, = 728,000.]

1 Years.	2 Flax, Dressed and Undressed.	3 Hemp, Undressed.	4 Jute, Undressed.	5 Foreign and Colonial Wool.	6 Acres under Flax in Ireland.
	cwts.	cwts.	cwts.	lbs.	
1855.....	1,293,	728,	539,	99,300,	97,075
'56.....	1,687,	771,	731,	116,311,	106,311
'57.....	1,866,	782,	618,	129,749,	97,721
'58.....	1,283,	886,	738,	126,738,	91,646
'59.....	1,432,	1,059,	1,061,	133,284,	136,282
'60.....	1,464,	768,	816,	148,396,	128,595
'61.....	1,333,	769,	904,	147,172,	147,957
1862.....	1,798,	915,	963,	171,943,	150,070
'63.....	1,458,	1,018,	1,223,	177,377,	214,099
'64.....	1,842,	953,	2,024,	206,473,	301,693
'65.....	1,913,	1,002,	2,108,	212,206,	251,433
'66.....	1,547,	982,	1,625,	239,358,	263,507
'67.....	1,440,	878,	1,597,	233,703,	253,257
'68.....	1,816,	1,072,	2,180,	251,747,	206,446
Average, 1855-61	1,480,	823,	772,	128,707,	115,083
„ '62-68	1,688,	974,	1,674,	213,258,	234,357
Increase per cent.	14	18·3	116·7	65·6	103·6

(F).—QUANTITIES and VALUES of the Three Great TEXTILE FABRICS
EXPORTED from the United Kingdom.

1	2	3	4	5	6	7
Years.	Cotton Manufac- tures.	Linen Manfrs.	Woollen, Worsted, and Mixed Manfrs.	Cotton Manfrs. of all kinds.	Linen Manfrs. of all kinds.	Woollen, Worsted, and Mixed Manfrs. of all kinds.
	Mln. yds.	Mln. yds.	Mln. yds.	Mln. £	Mln. £	Mln. £
1855	1,937,	118,	133,	27,57	4,11	7,71
'56	2,035,	146,	156,	30,20	4,88	9,50
'57	1,979,	133,	177,	30,37	4,50	10,70
'58	2,324,	121,	166,	33,42	4,12	9,77
'59	2,562,	138,	193,	38,74	4,60	12,05
'60	2,776,	143,	190,	42,14	4,80	12,15
'61	2,563,	116,	164,	37,57	3,85	11,11
1862	1,681,	156,	177,	30,54	5,13	13,14
'63	1,710,	181,	217,	39,52	6,50	15,48
'64	1,751,	210,	241,	45,79	8,17	18,53
'65	2,014,	247,	279,	46,92	9,15	20,10
'66	2,575,	255,	281,	57,90	9,57	21,79
'67	2,832,	211,	249,	53,12	7,43	20,12
'68	2,966,	209,	269,	50,12	7,09	19,52
Average, 1855-61	2,311,	131,	168,	34,29	4,41	10,43
„ '62-68	2,219,	210,	245,	46,27	7,58	18,38
Increase per cent.	—	60·2	45·2	34·9	71·7	76·2
Decrease „	3·9	—	—	—	—	—

Note.—27,57 (col. 5) = 27,570,000l., and 1,937, (col. 2) = 1,937 millions of yards.

(G).—Estimated Weight of Cotton contained in Manufactures Exported
and Retained for Home Consumption; the Average Price of Wheat, and
the Bank Rate of Discount.

Years.	Weight of Cotton Consumed, after Cleaning.	Weight of Cleaned Cotton in Yarn and Manufactures Exported.	Weight of Cleaned Cotton Manufactures Retained for Home Consumption.	Average Price of Wheat.	Average Bank Rate of Discount.
	Mln. lbs.	Mln. lbs.	Mln. lbs.	s. d.	
1855	755,19	558,19	196,99	74 8	4 $\frac{3}{4}$
'56	802,26	593,46	208,79	69 2	5 $\frac{3}{4}$
'57	743,40	578,72	164,67	56 4	6 $\frac{3}{4}$
'58	815,04	670,03	145,00	44 2	3 $\frac{1}{4}$
'59	878,94	710,31	168,63	43 9	2 $\frac{3}{4}$
'60	975,24	757,26	217,97	53 3	4 $\frac{1}{4}$
'61	906,66	701,40	205,25	55 4	5 $\frac{1}{4}$
1862	404,54	345,58	58,96	55 5	2 $\frac{1}{2}$
'63	456,80	387,35	69,44	44 9	4 $\frac{1}{2}$
'64	511,08	383,91	127,17	40 2	7 $\frac{1}{2}$
'65	646,58	499,77	146,81	41 10	4 $\frac{3}{4}$
'66	824,13	664,09	160,03	49 11	7
'67	859,68	747,25	112,42	64 6	2 $\frac{1}{2}$
'68	886,86	779,39	107,46	63 9	2 $\frac{1}{8}$
Average, 1855-61	839,53	652,77	186,76	—	—
„ '62-68	655,66	543,90	111,75	—	—
Decrease	183,86	108,86	75,00	—	—
„ per cent.	21·8	16·6	40·1	—	—

MISCELLANEA.

CONTENTS:

	PAGE		PAGE
I.—Statistical Notes on some Experiments in Agriculture	438	VI.—Movement for International Economy of Military Expenditure	456
II.—The Changes in Agriculture in Cornwall since 1800	441	VII.—Matriculation and Honour Lists, 1832-68	459
III.—The Depreciation of Gold, 1847-69	445	VIII.—The Tyne: Progress of Shipping Entries, 1854-68	459
IV.—New Zealand Census, December, 1867	450	IX.—Management of Towns in the United States	461
V.—Medical Students	453	X.—Australasian Gold	462
		XI.—Opium in China	463

I.—*Statistical Notes on some Experiments in Agriculture.*

COMMUNICATED by Frederick Purdy, Esq., Honorary Secretary of the Statistical Society, to Section F of the British Association, at Exeter, 1869:—

If the man who causes two blades of grass to grow in place of one, is a benefactor to the community, then he who produces four instead of one, has doubly benefitted the commonwealth. This, Mr. Lawes of Rothampstead has, we shall find literally, succeeded in accomplishing. As a scientific agriculturist Mr. Lawes is well known, and the last account of his experiments,—investigations that in some instances have been extended over twenty consecutive years,—is an admirable illustration of that patient questioning of nature which Bacon so strenuously enforced. The memoranda of the plan and results, which Mr. Lawes has circulated among his friends, give the issue of upwards of 1,400 separate experiments—not experiments that can be quickly performed like the ordinary ones of the laboratory—but experiments each requiring one revolution of the seasons for its answer.* It is beyond my scope to attempt a description of these researches in any detail, at the same time I hope to convey some idea of the extreme importance of Mr. Lawes's achievements, by selecting a few salient examples from each process of cultivation employed by that gentleman:—

Permanent Meadow Land.—The area experimented on was about $6\frac{3}{4}$ acres, divided into 20 plots—with few exceptions, duly noted, the same description of manure has been applied year after year to the same plot. The meadow land chosen “has been probably laid down in grass for some centuries.” It is known that no fresh seed had been artificially sown for thirty years,—nor is there any record of an earlier sowing. When the experiments began, the herbage seemed uniform over all the plots. I take for this crop, and for the two grain crops which in the account follow, the yield of the *unmanured* ground, and compare it with the yield of that *manured* plot which furnished the *greatest* product.

The yield of the plots unnoticed here, range at various distances between the extreme results selected for comparison below.

* *Memoranda of the Plan and Results of the Field Experiments conducted on the Farm of John Bennet Lawes, Esq., at Rothampstead, Herts. May, 1869.*

Experiments on Permanent Meadow Land.

	Produce per Acre Weighed as Hay.	
	Average of Thirteen Years, 1856-68.	1868 alone.
	cwts.	cwts.
Plot (11 <i>a</i>) dressed with artificial manure, which afforded the <i>maximum</i> yield	64½	72¼
Average of two Plots (3 and 12) <i>unmanured</i> continuously during the thirteen years	24	20¾
Difference in favour of the manured Plot (11 <i>a</i>)	40½	51½

Note.—The numbers in brackets after the plots, here and hereafter, refer to the enumeration of the original paper.

Taking the whole period under trial, the maximum plot gave a heavier product than the ground left to unaided nature, by 166 per cent. Last year the divergence was wider, for the assisted plot gave more, and the unassisted less than the average, the difference being 250 per cent. in favour of the former as against the latter. The artificial manures applied to the maximum plot were, sulphates of potass, soda, and magnesia; superphosphate of lime, ammonia salts, silicate of soda, and silicate of lime. For the quantities and periods of dressing, I must refer the Section to Mr. Lawes's paper, which goes into minute and exact scientific particulars.

Chemistry has taught agriculturists that their husbandry will not draw from the soil or the atmosphere what is neither in the soil nor in the atmosphere. The corollary of this lesson seems to have determined the operations on Plot No. 18. The ground was annually dressed with a mixture, per acre, equal to the respective quantities of potass, soda, lime, magnesia, phosphoric acid, silica, and nitrogen contained in a ton of hay. The average yield of hay for the four years 1865-68, was 32¼ cwt., or 8 cwt. in excess of the two unmanured plots represented in the table above. In 1868 the yield was 27½ cwt. or 6¾ cwts. above the produce of the unmanured plots in the same year—just *one-third* of the chemicals was returned to the cultivator by the surplus hay in this year's trial.

Barley.—The area under experiment was about 4¼ acres, divided into 28 plots. The grain sown on the same land year after year, and, for the most part, the same manures used continuously on each plot.

Experiments on the Growth of Barley.

	Produce per Acre. Average of Seventeen Years, 1852-68.		
	Dressed Corn.		Total Straw.
	Bushels.	lbs. each.	cwts.
Plot [(4) 4 AAS] dressed with arti- ficial manure, and affording the <i>maximum</i> yield	50½	52¾	33¼
Average of two Plots (1 O and 6 I) <i>unmanured</i> continuously during the seventeen years	21¾	52¼	12½
Difference in favour of the manured plot	28¾	½	20¾

The average yield during the seventeen years of the maximum barley plot, as against the unmanured plots, was 132 per cent. of dressed corn in excess. There was also an increase of weight of about 1 per cent. The proportionate increase of straw, viz., 166 per cent., was greater than the proportionate increase of grain. The dressing for the maximum plot was nitrate of soda, superphosphate of lime, mixed alkalies, and silicate of soda. A Plot (7) treated with farmyard manure in the concentrated form of *exuviae*, at the rate of 14 tons per acre yearly, produced on the average of 1852-68, dressed corn 48 bushels of 54 lbs. each, the straw weighing 28¼ cwt. It is noticeable that this plot gave the heaviest weight per bushel of dressed barley. The seventeen years' mean weight per bushel being 52¾ lbs. off the other plots.

Wheat.—Area under experiment about 13 acres, made into 26 plots. Wheat sown on the same land, without intermission, for twenty-five years. Nearly the same description of manure on the same plot each year, especially during the last seventeen years, to which term the following experiments were limited :—

Experiments on the Growth of Wheat.

	Produce per Acre. Average of Seventeen Years, 1852-68.		
	Dressed Corn.		Total Straw.
	Bushels.	lbs. each.	cwts.
Plot [16 (<i>a</i> and <i>b</i>)] dressed with artificial manure, and affording the <i>maximum</i> yield	39½	58	46½
Average of two Plots (3 and 20) <i>unmanured</i> continuously during the seventeen years ;	14¾	57½	14
Difference in favour of the manured plot	24¾	½	32½

In relative, but not in absolute, excess, the maximum plot shows a larger result in wheat than in barley; in the former grain the excess is 168 per cent. The specific weight of grain here also shows but small increase over that grown on unmanured ground. The increase of straw is no less than 232 per cent. This maximum plot had from 1852-64, yearly, mixed alkalies, superphosphate, and at the rate per acre of 800 lbs., ammonia salts. A plot (2) treated with farmyard manure, at the rate of 14 tons an acre, gave on the average of seventeen years, 35½ bushels of dressed wheat of 60 lbs. per bushel, and 34 cwt. straw. Here again the natural manure must be credited with producing the heaviest bushel. It is seen that in 1868 the quantity grown on the maximum wheat plot was much below the average, being only 22¾ bushels per acre, but the weight was 62¾ lbs. to the bushel, or 4¾ lbs. above the seventeen years' average. But this year the comparative weights were all largely in excess of the mean. At the same time, the unmanured Plot No. 3, the one alone recorded for 1868 separately, gave 16¾ lbs. per acre, or 2 lbs. beyond the average produce of 1852-68.

There are a number of other patient trials in the growth of green crops and root crops narrated, whose more or less successful results Mr. Lawes has detailed in his paper. The issue of one which the experimenter regards as notable, I give it

in his own words:—"In alternating wheat with beans," Mr. Lawes observes, "the remarkable result has been obtained, that nearly as much wheat and nearly as much nitrogen were yielded in eight crops of wheat in alternation with the highly nitrogenous beans, as in sixteen crops of wheat grown consecutively without manure in another field; and also nearly as much as were obtained in a third field in eight crops alternating with bare fallow."

I will conclude this sketch with an abbreviated account of a series of rotation experiments extending over twenty years, 1848-67 inclusively. An area of 2½ acres was divided into three plots, each was sown alike year by year, and in this order of succession:—First year, turnips; second year, barley; third year, beans; fourth year, wheat; the fifth, turnips; again and so on throughout the twenty years. Plot 1 was unmanured continuously. Plot 2, manured with phosphate of lime for the *turnips* only, consequently this was manured once in four years. Plot 3, treated with complex manure (artificial entirely) for the *turnips* only, and therefore once in four years like No. 2.

The average results for the corn and roots are given below; the straw and leaf produce is omitted.

Crops in Rotation.	Corn or Roots Produced on		
	Plot 1, Unmanured continually.	Plot 2, Superphosphate of Lime, for Turnips alone.	Plot 3, Complex Manures, for Turnips only.
1st. Swedish turnips..... cwts.	26½	136¼	242½
2nd. Barleybshls.*	41½	30½	44
3rd. Beans..... „ *	12½	12¾	21½
4th. Wheat „ *	33	30½	35½

* All dressed corn.

Plot 1 produced much less of turnips than the others, but the dressing of the turnips on Plot 2 apparently injured the barley much, and the wheat in smaller degree; the beans slightly affected. But on Plot 3, all the crops attained their *maxima*; the turnip produce was ninefold as against the gathering from the unmanured ground of Plot 1.

There are many other and important essays in experimental agriculture, concisely described by Mr. Lawes in the *Memoranda*, but which yielding unready to statistical illustration, I have refrained from touching.

II.—*The Changes in Agriculture in Cornwall since 1800.*

The following paper was read by Mr. John Thomas, of Pradannack, Mullion, at the last monthly meeting of the Helston Agricultural Exchange:—

“Almost the only field crops at the commencement of this century were *wheat*, *barley*, and *oats*; even potatoes were far from being so extensively cultivated as

they were a quarter of a century afterwards; and as for turnips, which now fill such an important part in our cultivation, they were scarcely then known. The only manure available was what was made on the farm, with the exception of sand, where convenient for carrying, and lime in certain localities, and upon certain soils, marl was also used in favourable localities. Farms near the towns at this time were considered of greater proportionate value than they would be in the present day, for the facilities they afforded to obtain town dung; every kind of compost that could be got was carefully cleaned up, such as road scrapings, &c.; this was considered then, as it is now, beneficial for wheat. *Labour being low*, many things were then carried as manure which now would not be considered to pay. There being little or no turnips, and very little house or stall feeding, of course the farm-yard manure was little, and that of very inferior quality. Where straw was plentiful, it was thrown about the yards, such as they were, and a favourite way of preparing the dung was to heave it up in a high heap in the yard; this was to prevent cattle from treading on it, as it would rot down much faster in this way. The application of the dung was for wheat and barley, but then it was always rotten dung for barley—that is, twelve months' old top-dressing, for dressing on grass was then, I believe, scarcely ever adopted.

“The first thing I wish to notice in the way of cropping, is the cultivation of the *potato*. As I remarked before, at the commencement of this century this plant was cultivated little more than as a household vegetable, yet in a few years after it came to be so extensively cultivated, especially for fattening pigs, that when it began to fail from disease, it was felt to be a national calamity, and the farmer, for a long time, looked in vain for anything approaching to a substitute. It is singular that this root, said to have been introduced into Europe three centuries before, should not have come into general use before the time I speak of, and it is equally singular that it so soon showed symptoms of decay. I estimate about thirty or forty years as the period the potato was under extensive cultivation. *It is amusing to hear of the prejudice by which this root was received by our forefathers, who ascribed every calamity, whether natural or national, to its introduction.*

“The next thing which should claim our attention is the *root crop*, and under this head, of course, the turnip is the chief or most important. This produced a very great change in the rotation of crops, as well as the keeping of stock. I believe the turnip had been moderately cultivated in some counties before the date we have now under consideration; but in this county and this locality, it is not more than fifty or sixty years since the turnip may be said to have been cultivated for the use of stock. It felt its way in at first very slowly; the pioneer was the pasture turnip, and then followed the Swede or rutabaga. I believe I remember the first rutabaga cultivated in the parish in which I reside, and I have seen in that time the cultivation of the turnip increase from—if I were to say 1 to 10 per cent. of the land under cultivation, I suppose it would be a just approximation.

“There is another subject so intimately connected with the root crop, that we can scarcely speak of one without thinking of the other—you will anticipate that I mean the discovery of *new manures*; every other change sinks into nothing compared to this. Other changes have been more or less partial; this has been organic, and it has affected the whole; this may be regarded as a revolution, as affecting the very constitution of things; and had it not been for this revolution, the English farmer must have had a strong constitution indeed to have sustained some of the pressures that have been put on him. It is about thirty or thirty-five years since the introduction of those manures, and it is surprising in that time to what extent and how general they are become. The four principal of the manures to which I refer are *bone, guano, phosphates of lime, and nitrate of soda*; these are frequently called artificial manures, although art or science has had little to do with the two first, or with their discoveries as manures. It would be interesting to know who was the first to apply broken bones to plants; no doubt the discovery was made by observing how tenaciously the fibres of plants clung to pieces of bone in the soil. Any reflecting mind might have suggested the idea of breaking the

food for the plant, and as to guano, which is a natural deposit, and had been used by the Peruvians for centuries, of course our traders to that part of the world would ascertain its fertilising properties. I was talking some time since with a gentleman who was the first that ever used guano in this county. He said he had been having artificial food for his cattle from a large house in London; they sent down a bag (2 cwt.) of this stuff, and said it produced wonderful effects in South America, and desired him to try it, to see if there was any good in it. He applied the 2 cwt. to one acre of oats, and the effect was wonderful—greater than he has ever seen from that time to the present. On the discovery of those new manures, the root crops may be said to have claimed them for their own, and the stimulus given to the growth of green crops was surprising.

If Science had not much to do with discovering new manures, Art has done a great deal by inventing the drill, horse-hoe, &c., without which those manures could not be economically applied, and it would be impossible for the crops to be cleaned. Before the introduction of green crops, a good summer's fallow for wheat was the only chance a farmer had to clean his land; but by the use of the drill, to be followed by the horse-hoe, two ends could be obtained at one time—cleaning the land and raising the crop. Although I may not be willing to admit that we owe so much to chemistry as some claim for that science, yet I conceive we are under immense obligations to the inventive genius of the mechanic.

“At the commencement of the present century, few and simple indeed were the *implements* of husbandry. The plough, harrow, stone roller, and tormentor may be said to comprise all the field implements. These were of a very rude description, compared with those of the present day, and when we think of the plough in use then, with its shoe-like share, put on to the wooden chip, it is surprising how well, in many instances, the work was accomplished. I think it would puzzle some of our best ploughmen in the present day to manage such implements at all. Great attention has been paid to the improvement of the plough, which must be regarded as the first or chief of agricultural implements, until it has arrived to that state of perfection and does its work with such precision that we might justly give it the distinguished title of a mathematical instrument. Not only has a great change been made in those implements which affect the culture of the land, but also in those which affect the *securing of crops*. The change here is marvellous indeed, when we think of the stride from the sickle or old reap-hook, to the graceful reaper drawn by horses and laying down the bundles in such quick succession. The change is equally great in those things which affect the preparing and returning the crops as those of cultivating and securing, within the memory of those who are past the middle age of life. The flail, or *threshall*, as it was locally called, was the principal thing used in beating out the corn, so simple in its construction that it had not undergone any change or improvement since the days of our Saxon forefathers; and then, again, the winnowing, which was principally done by women heaving it up against the natural current of air, subject to all the annoyances of calm, rain, and change of wind. I have heard that when the winnowing machines were first introduced, some objected to them as subverting the laws of nature by making artificial wind. Horse thrashing machines were certainly in use at the commencement of the century; but then they were few, and only on large farms. Cobbett speaks of the beautiful music of two flails and a cuckoo. Of course this had an under meaning: that the farmer who could keep corn till spring or summer, was supposed to be in easy circumstances. Now, when we consider the change from the flail and sieve and keiser to the ponderous steam machines that are now moving from farm to farm, and preparing for market its 100 or 200 Cornish bushels a-day, it is almost past our comprehension, and especially when we think that there had been no improvement in that branch of farming for, perhaps, a thousand years before.

“The next thing I would call your attention to is to keep and *breed of stock*. It is true, strictly speaking, this is not agriculture; but in common acceptance, it comes under the same meaning, and, I suppose, in a paper of this kind would be expected to be treated of. Sixty years ago very little attention was paid to what

is now thought and talked of so much—I mean the breed or blood of stock. First, we will take bullocks. The old Cornish or primitive cattle were then general; the only admixture at all would be the North Devons. It is true that this useful breed had, at the time we refer to, found its way into many parts of the county. Although, at the commencement of the century, there was very little attention paid to breeding, yet there were many fine bullocks reared and fed. The reason was this: oxen were much in use, and all the best or most promising steers were kept for that purpose. These were worked for a few years, and hence they were got to a maturity of growth before fattened; great numbers of steers and oxen were brought down for the eastern part of the county, and it was a source of pride and emulation among the old farmers who should turn out the best oxen. I remember oxen of a thousand weight of the old Cornish breed, but these were not general. Cattle, now-a-days, are brought to the market at a much earlier age, and I suppose we may put down, as a fair average, that they are 2 cwt. heavier when brought to the market than fifty years ago. In those days, there being little or no turnips, cattle had frequently a hard time of it to pass through the winter, and in summer, being turned away to commons or the coarsest pasture in low condition, young stock were frequently four or five years old before they came into profit. I must notice here the introduction of a new breed of cattle, the *Shorthorns*, or, as they were first called, the *Durhams*. These were first introduced into this county (as I suppose) by the late Mr. John Penhallow Peters, and I estimate the time about forty years since. The shorthorns have now spread themselves by mixture and otherwise over many parts of the county, and have many admirers, and in some instances are brought to great perfection; but whether they will stand the climate and many of the poor soils of Cornwall, time alone can show. More recently the *Hereford* stock has been introduced, but up to this time has not become very general.

“However great a change has taken place in the breed, keep, and management of bullocks, the same remarks will apply equally to *sheep*. A small hardy sheep, without any introduction of new blood, was all that was to be found in this county at the commencement of the century. The first impetus given to the improvement of this stock, was by the introduction of the *Leicester*, and, I suppose, like the shorthorned cattle, the honour belongs to Mr. J. P. Peters. *Southdowns* have also found their way into many parts, and recently the *Shropshire*, which is a larger and better shortwoolled sheep. But, however great the change has been in the breed, it is little compared to the improvement in keep and attention given to this stock. By the introduction of two or three new breeds, both in cattle and sheep, of course the crosses have been almost interminable. Many of those crosses have been successful, but it requires great caution in this matter. This is, however, foreign from our present subject. Pigs must now, for a moment, claim our attention; and I must say they have come in for a fair share of attention with agriculturists generally, and although they are discontented animals, especially without meat, they have no reason to be discontented on this ground.

“We can remember when the large white pig was the only one to be found, with immense ears hanging over its face, and if the elephants recently exhibited here were called ‘umbrella elephants’ in consequence of their large ears, I think, if the ladies would allow us, these pigs might claim the name of ‘parasol pigs;’ for their ears kept the sun out of their own eyes at any rate. The present breeds of pigs are too well known for me to trespass any further on your time. *Horses* were in many instances very good fifty years ago, and there is not the improvement in this as the other stocks we have named. Horses were worked less, and fared harder than at the present day. The horses then, although not generally so large as at present, were characterised for great endurance of fatigue, and were exceedingly sure-footed on the roads. Farm horses frequently, like bullocks, had to winter it as best they could, with no other covering than nature supplied them with; and this leads us on to consider the greater accommodation in farm buildings than formerly. Supply and demand have followed each other. Green crops brought more cattle, and more cattle brought more houses.

“ *House accommodation* is now one of the first things a farmer has his eye to when taking a farm, and one of the first stipulations with his landlord. I remember once talking with a friend from America, who had been absent from this country over twenty years : he said nothing struck him so much, on his return to Cornwall, as the improvement in farm buildings. Within the last few years there has been a great stimulus given to the improvement of *waste land*. The causes which have led to this are, I consider, in the first place, the discovery of new manures ; secondly, improved implements ; and lastly, the long continued high price of farm produce, consequent, under the blessing of Providence, on a state of national prosperity, caused, no doubt, by a long peace, and the resources of the nation being turned to agriculture, manufactures, and commerce, instead of the destructive art of war ; and we must also admit that we are not a little indebted to the wise and liberal acts of the Legislature. A great deal of waste land was brought under cultivation before the close of the last French war, which, after the peace, in many instances was again left to run to a state of nature, owing to the depression which fell on the nation after such a long war. But I think it may be safely anticipated that those who enter upon such speculations now, have far safer data to go upon, and they deserve the encouragement and good wishes of the community at large. We might give one word to what is called *thorough draining*. Although wet parts of fields and cutting out of springs had been frequently attended to, yet such a thing was never known as to drain land systematically. Here, again, we are in a great measure indebted to the inventor of the drainpipe machine, as, without pipes, stone could never be got in sufficient quantities for such purpose. Perhaps few things have undergone a greater change in agriculture during the last fifty or sixty years than labour. *I estimate that labour in that time has been economised near fifty per cent.* This is principally owing to machinery, though other causes have operated also. During the same period the price of labour *has risen thirty-five per cent.* ; and it costs a great deal more in implements and machinery than formerly. The changes in our natural lives are scarcely distinguishable from year to year. As when on a journey our advancement is not sudden, yet, when we sometimes take a stand and look back, we find that we have progressed a long way, so in the subject we have now under notice, we may not have seen great changes from one year to another, yet, in looking back half-a-century, we see a vast difference in that time. There is one thing we should ever bear in mind—that the efforts and inventions of man are puny indeed without the blessing of a gracious Providence ; and, although some seasons have been more propitious than others, yet the sunshine and the shower have been given—summer and winter, seed time and harvest, have not failed.”

III.—*The Depreciation of Gold, 1847-69.*

THE following communication from Professor W. Stanley Jevons, appeared in the *Economist* on the 8th May last :—

“ It is interesting to examine at intervals the evidence brought by the efflux of time concerning the effects of the great gold discoveries of 1849 and 1851 upon the value of gold. Almost twenty years have now elapsed since the new supplies began to be received, and taking into account the rapid means of communication with all parts of the world which this age enjoys, it can hardly be doubted that a certain equilibrium has been attained in the distribution of the precious metals, and that the character of the results will now be manifest.

“ The present year is especially suitable for a retrospective inquiry, because we have just passed through nearly three years of commercial prostration, during which the use of credit has been undoubtedly reduced to its minimum, and prices have suffered a corresponding depression. Taken in connection with the similar depression which followed the collapse of 1857, this gives us ample means of judging

whether a real rise of prices has been established, because it assures us that any rise of prices which may be detected is not due to a temporary cause, such as the inflation of prices by credit.

“I have therefore made some calculations founded upon your price lists, in order to bring down to the present time the estimates of the general variation of prices which I first attempted in my pamphlet on the Value of Gold, and afterwards extended over the whole period embraced in Mr. Tooke’s *History of Prices*, the complete results being published in the *Journal* of the London Statistical Society for June, 1865. The inquiry is substantially of the same nature as that which was originated by Mr. Newmarch in the *Statistical Journal* for 1859, and which has since been continued in your invaluable Annual Review. Your readers will probably have noticed on p. 44 of the *Commercial History and Review* of 1863, a table containing the proportionate prices of a number of commodities compared with their average range in 1845-50, and a column is added containing what you have called the total index number, formed by the simple addition of the percentage numbers of the separate commodities. My method is very similar, but consists in calculating, in a manner fully described in the *Statistical Journal*, the average ratio of prices in March of each year to prices in the same part of the previous year, so that by the junction of these ratios the prices of each year can be compared with those of any year before or after, just as in taking the levels of a line of country the difference of level of each two successive points is measured, and then the difference of any two points on the route can be ascertained by the simple junction of the intervening differences. Any year may readily be made the *datum line* or point of comparison, but the year 1849 is peculiarly fitted to be the starting point, because it was not only the first year of the gold discoveries, but it also happens that prices then reached the lowest point which they have attained during the present century.

“The following numbers thus deduced show the average ratios of the prices of about fifty of the chief articles of commerce during the last twenty-two years to the prices of the same articles in 1849:—

Year.	Average Ratio of Prices to those of 1849.	Year.	Average Ratio of Prices to those of 1849.
1847	122	1859	120
'48	106	'60	124
'49	100	'61	123
'50	101	'62	124
'51	103	'63	123
'52	101	'64	122
'53	116	'65	121
'54	130	'66	128
'55	125	'67	118
'56	129	'68	120
'57	132	'69	119
'58	118		

“It appears from the above that the range of prices has since 1853 been always considerably above the point they attained in 1849. The three great collapses of credit and enterprise occurred in the years 1847, 1857, and 1866, and the depressions of prices thereby occasioned were respectively 22, 14, and 10 per cent.; it is perfectly fair therefore to compare together the three lowest points thus attained in the years 1849, 1858, and 1867, and we thus learn that there has been a *net* or

permanent rise of 18 per cent. accomplished in the prices of about fifty of the chief materials and commodities. The still greater elevations of 32 per cent. in 1857 and 28 per cent. in 1866 are partly due to the inflated credit and excessive speculation of those periods. It may seem that my numbers under-estimate rather than over-estimate the fluctuations of prices; but it must be remembered that though many commodities in which speculation chiefly takes place vary much more than is shown in the average, there are many articles—such as butcher's meat and provisions—which are little subject to speculative changes, and in drawing a wide average many considerable changes in individual commodities are entirely obliterated.

“The results given above will be found to correspond pretty closely with the like results which are easily drawn from the index numbers in your Annual Review, except that from 1863 to 1867 you represent prices as having risen much more than I state them. This I find is due to your index number being the sum of twenty-two different numbers, of which four numbers represent the increased prices of raw or manufactured cotton; as these prices have risen in one case as much as by 360 per cent., a great effect is produced on the aggregate. My quotations include only three out of fifty depending on cotton; besides which my mode of drawing a geometrical average always gives a less result than the simple addition employed in the Annual Review. It may be a matter of opinion which result is the truer one, but at any rate I am satisfied to feel that I under-estimate the fluctuations of prices as compared with the results in your Annual Review.

“I cannot help then reasserting with the utmost confidence that a real rise of prices, to the extent of 18 per cent., as measured by fifty chief commodities, has been established since the year 1849. This is an undoubted depreciation of gold, because it represents a real diminution in the general purchasing power of gold. Nor can we well avoid attributing it to the effect of the gold discoveries. Indeed, as Professor Cairnes has so distinctly pointed out, the effect of those discoveries is probably much greater than any we can prove, because the course of prices was in previous years decidedly downwards, so that the new gold has both prevented a further fall and occasioned a rise in its stead. To illustrate this, I have formed from the tables given in my paper in the *Statistical Journal* (founded upon Mr. Tooke's tables of prices) the following comparison of prices at intervals of ten years, taking the year 1849 as the datum point:—

Year.	Average Ratio of Prices to Prices of the Year 1849.
1789	133
'99	202
1809	245
'19	175
'29	124
'39	144
'49	100
'59	120
'69	119

“Between 1809 and 1849 we notice a vast decline of prices, to the extent of 145 per cent., the previous rise having been nearly as great. With this great revolution in the value of gold, we are only concerned so far as regards the fact that previous to 1849 a great decline in prices was in progress. This decline was interrupted during the years 1835-39 by a temporary rise, due perhaps to excessive speculation, but the decline was renewed as rapidly as before until we reach the

critical year 1849. Since then the course of prices seems to have been entirely altered, and a permanent rise has been established.

“ Not a few able writers, including Professor T. C. Leslie, who lately addressed you on the subject, are accustomed to throw doubt upon all such conclusions, by remarking that until we have allowed for all the particular causes which may have elevated or depressed the price of each commodity we cannot be sure that gold is affected. Were a complete explanation of each fluctuation then necessary, not only would all inquiry into this subject be hopeless, but the whole of the statistical and social sciences, so far as they depend upon numerical facts, would have to be abandoned. It has been abundantly shown by M. Quetelet and others, that many subjects of this nature are so hopelessly intricate, that we can only attack them by the use of averages, and by trusting to probabilities. The price of any one commodity, even silver, utterly fails as a measure of the value of gold, because it is sure to be affected by numerous conflicting causes of rise and fall, no one of which we can accurately estimate. Even the intimate knowledge which a merchant gains of the commodity in which he deals is insufficient to enable him to explain, still less to predict, the changes in its price with confidence. But when we take a large list of fifty commodities the probability is almost infinite that particular influences will not all act the same way, so that a rise in one case will balance a fall in another. The average then must in all reasonable probability represent some single influence acting on all the commodities. This influence may indeed be something affecting the commodities rather than gold—for instance, a general increase of demand not met by a corresponding supply. This is possible but not likely, because the supply of many articles is exceedingly increased and cheapened by the progress of civilisation. Even if it were the commodities which were altered in their conditions of supply and demand, the result would not the less be an alteration in the purchasing power or value of gold. But considering that there is no reason to suppose the supply and demand for gold would always maintain an equilibrium, and that a most extraordinary change has taken place in the conditions of supply, the probability is excessively great that we find the true cause in the gold discoveries.

“ To complete the argument, I have only to ask those who think that the growth of population, the increase of demand, or the progress of trade is the cause of the rise of prices, whether population, demand, trade, &c., were not expanding before 1849, not so rapidly perhaps as since, but still expanding; and how it is that causes of the same kind have produced falling prices before 1849 and rising prices since?

“ To gain some notion of the degree of probability of conclusions on this subject, it has occurred to me to apply the ordinary methods of the theory of probabilities to the results stated in my pamphlet on the value of gold. The list of commodities there given (including cotton) contained thirty-six different articles, of which twenty-nine were found to have risen in price in 1862, as compared with the average of the years 1845-50, while only seven had fallen in price. All the alterations of price (excluding the extreme rise in the case of cotton) lay between a fall of 26 per cent. and a rise of 67 per cent., but most of the alterations were about 10 or 20 per cent. Regarding each of these thirty-six commodities as a separate and independent measure of the alteration in the value of gold, I first took the average rise of prices, namely, 16 per cent., as the most probable estimate which these thirty-six measures give, and then proceeded to calculate by the ordinary method of least squares the probable error of this result. This probable error proved to be just $2\frac{1}{2}$ per cent.—that is to say, *it is as likely as not that the true alteration of gold lies within $2\frac{1}{2}$ per cent. of 16 per cent., or between*

13½ and 18½ per cent. From this result we can readily calculate the probability that gold is depreciated *in some degree*, or that the true result if it be not 16 per cent. rise is above 0 per cent. rise. This probability proves to be so near to certainty that the tables required in the calculation do not go sufficiently far to enable me to give it exactly. It may be safely said that the odds are 10,000 to 1 in favour of a real depreciation of gold. The meaning of this is that the chances are 10,000 to 1 against a series of disconnected and casual circumstances having caused the rise of price—one in the case of one commodity, another in the case of another—instead of some general cause acting over them all. It is true that as the commodities do not all vary independently, different kinds of corn, for instance, generally recovering together, the improbability is not so great as stated; but if we reduce it ten times, to 1,000 to 1, it is great enough for my purposes.

“Taking into account the separate probability that such a result would follow from the gold discoveries, I believe it is wholly beyond doubt that the expected result has been manifested, but not in the mode predicted. Many eminent men, especially M. Chevalier, looked upon the depreciation of gold as a sudden and revolutionary event which would happen in the course of time, and yet I believe that when M. Chevalier was writing the most sudden and serious part of the effect had already been produced. Prices have never since stood so high as they did in 1854 and 1857, and though returning enterprise and expansion of credit will doubtless occasion another rise in the next few years there seems to be no reason to suppose that we shall get beyond the point attained in 1857. I should therefore not venture to call in question the remark of your annual reviewer, that the tendency is now in an opposite direction—in that of appreciation rather than depreciation. It is quite possible that the causes which occasioned a great fall of prices before 1849 are now again beginning to make themselves felt. All I contend for is the existence of some disturbance which in the last twenty years has prevented the previous fall of prices from continuing. The tables of your Annual Review unmistakeably prove the existence of a rise: to what must we attribute it? To the growth of population and trade? I think that the growth of population and trade tend to lower prices by increasing the use of gold, and to this cause we may reasonably attribute the fall of prices before 1849. But to attribute to the same cause, as some do, the diametrically opposite change which has occurred since 1849, is illogical in the extreme. The normal course of prices in the present progressive state of things is, I think, downwards; but for twenty years at least this normal course has been checked or even reversed, and why should we hesitate to attribute this abnormal effect to the contemporary and extraordinary discoveries of gold?

“It would not be difficult to show that not only have prices risen during the period in question, but that the relations of society have readjusted themselves in accordance. While statisticians have been disputing, society has practically accepted the fact of a rise. The pay of the army is increased, the whole of the civil service and the staff of the Bank of England receive larger salaries, and could the information be obtained, I believe the same change might be shown to have occurred in most private establishments. Trades’ unionists point to the services rendered by their societies in gaining a rise of wages. Financial reformers, on the other hand, point to the great increase in the public expenditure of the kingdom as a proof of extravagance. To all these effects the alteration in the value of gold has, I believe, contributed something; it would not be too much to say, that the increased cost of materials and wages has added three or even five millions to the public expenditure, and wages not unnaturally rose when gold was perceptibly depreciated.”

IV.—*New Zealand Census, December, 1867.*

FROM the *Australian Mail*, 13th July last:—

“ We have received, somewhat late indeed, the final results of the Census of the colony of New Zealand, taken in December, 1867. The principal tables have already been published, but it will be interesting to take a survey of the progress of the colony as a whole. The *triennial* census enumeration was taken for the night of the 19th December, 1867, on a plan substantially the same as that adopted in December, 1861, and December, 1864, by which the information was obtained not only for each province of the colony, but also for each of the electoral districts returning members to the General Assembly.

“ The population of New Zealand (exclusive of aboriginal natives and of the military and their families), was, as shown by the census returns for December, 1867, 218,668, of whom 131,929 were males and 86,739 females. The distribution of this population through the several provinces was as follows:—

	Males.	Females.	Total.
Auckland	27,063	21,258	48,321
Taranaki	2,528	1,821	4,359
Wellington	12,401	9,549	21,950
Hawke's Bay	3,197	2,086	5,283
Nelson	16,425	7,389	23,814
Marlborough	2,736	1,635	4,378
Canterbury	33,083	20,783	53,866
Otago	29,773	18,804	48,577
Southland	4,600	3,343	7,943
Chatham Islands	123	61	184
	131,929	86,739	218,668

“ It will be seen that the *Northern Island* (comprising the provinces of Auckland, Taranaki, Wellington, and Hawke's Bay), contained 79,912, or 36·58 per cent.; and the *Middle Island* (comprising the provinces of Nelson, Marlborough, Canterbury, Otago, and Southland), 138,571, or 63·42 per cent. of the whole population of the colony. There can be no doubt, however, that the actual numbers exceeded the totals given for the colony, as, besides individual omissions through the negligence of sub-enumerators or from other causes, there are almost insuperable difficulties in obtaining a correct enumeration of the gold-digging population. Had such an enumeration been practicable, the total would almost certainly have been many hundreds or even several thousands more than it is.

“ The ascertained numbers in 1867, as compared with the population shown by the census of 1864, exhibit *an increase* within the triennial period of 46,510, or 27·01 per cent. The *average annual increase* from 1864 to 1867 thus appears to have been 9 per cent. The following summary shows the numerical increase or decrease in each of the provinces within that period, with the proportionate increase or decrease in 1867, calculated on the population of each province in 1864:—

Towns, &c., 1867 as Compared with 1864.

Towns, &c.	1867. Increase.		1867. Decrease.	
	No.	Per cent.		
Auckland	6,189	14·7	—	—
Taranaki	—	—	15	·3
Wellington	6,963	46·5	—	—
Hawke's Bay	1,513	40·1	—	—
Nelson	11,904	99·9	—	—
Marlborough	—	—	1,148	20·8
Canterbury	21,590	66·9	—	—
Otago	—	—	442	·9
Southland	—	—	142	1·8

“ A comparative table shows the population for the respective *Provinces* in 1858, 1861, 1864, and 1867 :—

	1858.	1861.	1864.	1867.
Auckland	18,177	24,420	42,132	48,321
Taranaki	1,236	875	1,502	1,831
Wellington	11,753	12,566	14,987	21,950
Hawke's Bay.....	1,514	2,611	3,773	5,283
Nelson	9,272	9,952	11,910	23,814
Marlborough	—	2,299	5,519	4,371
Canterbury	8,967	16,040	32,276	53,866
Otago.....	6,995	27,163	49,019	48,577
Southland	—	1,876	8,085	7,943
Chatham Islands	85	50	86	184
Totals	59,413	99,021	172,158	218,668

“ In 1851 the *total population* numbered 26,707. In 1858 it had increased to 59,413, being an *increase* in seven years amounting to 32,706 persons, or 122·46 per cent. In 1861 the total was 99,021, being an *increase*, as compared with 1858, of 39,608, or 39·99 per cent. In 1864 the total was 172,158, being an *increase*, as compared with 1861, of 73,137, or 73·86 per cent. And in 1867, as has been shown, the total was 218,668, being an increase, as compared with 1864, of 46,510 persons, or 27·01 per cent. Comparing the two years, 1851 and 1867, the aggregate increase during the period of sixteen years amounted to 191,961 persons, or 718·77 per cent., being an average increase for each year included in the period amounting to 11,997 persons, or 44·92 per cent.

“ A separate table is devoted to the population of cities and towns in the colony :—

	1864.	1867.
Auckland.....	12,424	11,153
New Plymouth	2,944	2,180
Wellington	4,711	7,460
Napier.....	1,377	1,827
Nelson.....	4,701	5,652
Picton	889	506
Christchurch	6,438	6,647
Lyttelton.....	2,789	2,510
Dunedin	15,790	12,777
Invercargill	2,242	2,006
Parnell	—	3,226
Newton	—	3,227
Onehunga	—	2,177
Wanganui	—	2,157
Westport.....	—	1,500*
Charleston	—	1,800*
Brighton	—	1,000*
Addison's Flat	—	1,500*
Hokitika	—	4,866
Greymouth	—	1,607
Rangiora	—	1,042
Timaru	—	1,027
Port Chalmers	—	1,347
Oamaru	—	1,377

* Estimated.

“ An appendix relates chiefly to the *Northern Island*, in which the bulk of the *Maori* population is found, including, however, those in the province of Nelson and the prisoners who were then at the Chatham Islands. This does not profess to be any more than an estimate, and remarks appended to some of the figures point to the conclusion that estimate is below what are (or at least then were) the true numbers. Taking the figures as they stand, they show 14,897 men, 12,353 women, and 9,857 children, making a total of 37,107. These, added to the numbers in the Southern Island, represent the general (estimated) total of the aboriginal native population in the colony as 38,540.

“ The *average proportions of the sexes* in December, 1864, was—males, 61·91; females, 38·09; excess of males 23·82. In December, 1861, they were—males, 61·67; females, 38·33; excess of males, 23·34. This was a remarkable increase on the proportion of males as compared with 1858, when the proportions were—males, 56·68; females, 43·32; excess of males, 13·36 per cent.; but it was to a considerable extent explained by the great influx of miners to the gold fields of the colony, very many of whom were unmarried or had left their wives and families in other countries. It is gratifying to observe that, notwithstanding the continuance of this element of disparity, yet the last returns show some tendency towards an equalisation of the numbers of the sexes.

“ The general totals for the colony, as shown by the census of 1867, were as follow:—*Married males*, 34,291, being 15·68 per cent. on the whole population and 25·99 per cent. on the total number of males. *Married females*, 32,606; being 14·91 per cent. on the whole population and 37·59 per cent. on the total number of females. *Unmarried males* (including widowers and male children), 95,562; being 43·70 per cent. on the whole population and 72·43 per cent. on the total number of males. *Unmarried females* (including widows and female children), 53,177; being 24·31 per cent. on the whole population and 61·30 per cent. on the total number of females. The number of widowers and widows is, 2,380 widowers and 2,562 widows. There were 3,032 persons (viz., 2,076 males and 956 females) with regard to whom no information as to condition was obtained. If we deduct from the totals of ‘unmarried’ the persons under 15 years of age, the numbers remaining are—males, 55,217; females, 14,337. The proportions between the sexes from the age of 15 upwards is thus shown to be 79·39 per cent. of males and 20·61 per cent. of females. The information thus arrived at may be expressed otherwise, as follows:—Of every 100 of the total male population, 25·99 per cent. were married; and 41·86 aged 15 and upwards, with 30·58 under 15, were unmarried (there being 1·57 whose ‘condition’ was not stated); and of every 100 of the total female population, 37·60 per cent. were married; and 16·53 aged 15 and upwards, with 44·17 under 15, were unmarried (there being 1·10 whose ‘condition’ was not stated). According to the census of 1864, a similar calculation exhibited the following results. Of every 100 of the total male population, 25·78 per cent. were married; and 44·95 aged 15 and upwards, with 27·97 under 15, were unmarried (there being 1·50 whose ‘condition’ was not stated), and of every 100 of the total female population 38·50 were married; and 17·43 aged 15 and upwards, with 43·55 under 15, were unmarried (there being 0·52 whose ‘condition’ was not stated).

“ The total number of *houses or dwellings* in the colony in December, 1867, was 54,015, against 37,996 in 1864, being an increase of 16,019 within the three years. It is to be remarked, however, that the gross total for 1867 included 4,595 tents, against 6,742 in 1864, most of these in both years being, as might be supposed, in the gold fields districts. The tents may be regarded as included in the numbers of dwellings having ‘one or two rooms,’ which in 1867 amounted to a total of 26,558, against 18,841 in 1864; there being in 1867, as compared with 1864, 6,209 dwellings of three rooms, against 4,612; 7,844 of four rooms, against 5,352; 3,543 of five rooms, against 2,451; and 9,861 of six rooms and upwards, against 6,674 in 1864. With respect to the materials of which the houses were constructed, the returns show—wood, 31,844, against 25,463 in 1864; stone or brick, 1,182, against 1,082 in 1864; and other materials (including raupo houses and the tents above referred to), 13,989, against 11,451 in 1864.

"The *total male population* shown in the tables for the electoral districts (which, it is to be borne in mind, do not include the numbers who were on ship-board on the census night, or the inhabitants of the Chatham Islands), is 129,761; of whom 80,122 were aged 21 years or upwards. The *total number of electors* on the rolls at the same date was 33,338, a number which does not include the electors for the electoral district of the Otago gold fields, the nature of whose qualification (as defined in 'The Miners' Representation Act Amendment Act, 1863') does not admit of the formation of an electoral roll in the usual way. The *total number of representatives* for these constituencies in the General Assembly was seventy-two (including the two members for the Otago gold fields, but, of course, not including the members for the four Maori electoral districts constituted by 'The Maori Representation Act, 1867,' by which the House of Representatives has been made to consist of seventy-six members altogether). The proportion of electors to every 100 of the total male population shown for the electoral districts, in December, 1867, was 25.69 per cent., against 19.71 per cent. in 1864 and 22.39 per cent. in 1861, and the proportion to every 100 males aged 21 and upwards was, in 1867, 41.60 per cent., against 31.43 in 1864 and 39.32 in 1861. Table X contains calculations of the proportions for each electoral district; but although these calculations exhibit correct results as the electoral rolls actually stood at the time, the value of the detailed comparison between electoral franchise and population is necessarily qualified by the consideration that in numerous instances the electors are non-resident, many having votes in more than one district.

"The *places of birth* of the population are shown for the several provinces in two tables of some interest. The following were the proportions for the whole colony:—England, 30.01 per cent.; Ireland, 12.78; Scotland, 15.93; Wales, 0.60; New Zealand, 29.29; Australian colonies, 5.17; other British dominions, 1.74; United States of America, 0.56; France, 0.25; Germany, 1.30; China, 0.56; other foreign countries, 1.12; at sea, 0.34; not specified, 0.35."

V.—*Medical Students.*

AN Address delivered at St. Bartholomew's Hospital, by James Paget, F.R.S.:—

It is said that, on entering the anatomical theatre for one of his introductory lectures, Mr. Abernethy looked round at the crowd of pupils and exclaimed, as if with painful doubt, "God help you all! what will become of you?"

I am not aware that any attempt has hitherto been made to answer such a question. The grounds on which I venture an answer are, in the knowledge of what became of a thousand of my pupils within fifteen years of their entrance at St. Bartholomew's Hospital. The number may suffice for the grounds of that degree of general belief which, in a matter of this kind, is as near an approach to knowledge as we are likely to attain. And I believe that what may be told of the pupils of St. Bartholomew's, would hold true of those of all the metropolitan schools; for with us the varieties of students, according to differences of birth, wealth, and previous education, are collected, I believe, in very nearly the same proportions as would be found in all the other metropolitan schools together.

The pupils from whose careers the following notes are derived, were among those who attended, either my demonstrations of morbid anatomy between 1839 and 1843, or my lectures on general and morbid anatomy and physiology between 1843 and 1859. Of the former, I kept no complete lists, but have the names of ninety-five; of the latter, I have complete lists, containing 1,131 names. Of the total, 1,226, many have been quite lost sight of.* The careers of 1,000 are known

* Since writing the paper I have heard of a few more; but I have not used them for the tables. They would not disturb the proportions, which are more

either to myself or to Mr. Callender or Mr. Smith, or all of us; for we have worked together for this essay.

Of the thousand—

23	achieved distinguished success.
66*	„ considerable „
507†	„ fair „
124	„ very limited „
56	failed entirely.
96	left the profession.
87	died within twelve years of commencing practice.
41	„ during pupilage.

In this table, they are classed as having achieved distinguished success who, within fifteen years‡ after entering, gained, and to the end of the time maintained, leading practices in counties or very large towns, or held important public offices, or became medical officers of large hospitals, or teachers in great schools, as the professors of anatomy in Oxford, Cambridge, and Edinburgh, all of whom it was my singular good fortune to have for pupils.

Considerable success is ascribed to those who gained and still hold high positions in the public services, or leading practices in good districts, or who retired with money earned in practice, or gained much more than ordinary esteem and influence in society.

The fair or moderate success which was the lot of rather more than half of those whose histories are known, means that measure of well-doing which consisted in having a fair practice—enough to live with—maintaining a good professional and personal reputation, or in holding ordinary appointments in the public services, or in the colonies, and gaining promotion in due course of time.

Very limited success is assigned to those who, within the fifteen years, were not even in moderately good practice, or apparently likely to attain it; or who were just living, and that not well by their work; or still employed as assistants in ordinary practices; or erratic and never prosperous; or doing much less than, with their education and other opportunities of success, they should have achieved.

They who failed entirely were a very mixed class, agreeing only in their total want of success. Of the fifty-six who made up the gloomy total, fifteen were never able to pass examinations—some because of idleness or listlessness, a very few through sheer want of intellect. Of those who did pass, five failed because of scandalous misconduct; ten through ill-health, or misadventure, sheer ill-luck as it seemed; and ten through their continuance in the same habits of intemperance or dissipation as had made us, even while they were students, anticipate their failure. Of the remaining sixteen we only know that they have failed; they are not in disrepute, but they are barely maintaining themselves.

It will seem strange to every one, I think, that so many as ninety-six, that is nearly 10 per cent. of the whole number, left the profession after beginning either its study or its practice; and it is even less flattering to our calling that, to set over against those who left us, there were only seven who came to us from other studies or pursuits in life, and five of these again changed their minds and never engaged in practice.

Of these ninety-six, thirteen while pupils left or were expelled in disgrace, and three were wisely removed by their friends. Of the remaining eighty, one while

easily calculated in the exact thousand, than in a rather larger number. If it were possible to learn what has become of all those whom we have lost sight of, they would probably be classed in due proportions under all the headings in the table except the first two.

* Including three dentists.

† Including seven dentists.

‡ Or less, in the cases of those entering between 1854 and 1859.

still a pupil, and one after beginning practice, retired on private means, too rich to need to work; four, after beginning practice, had to leave in disgrace—one of these was rather sinned against than sinning; another, who had been a good student, speculated in mines, lost money, forged, and is in prison; three became actors, of whom two are in obscurity, and one is well esteemed in genteel comedy; four entered the army with commissions, one after and three before obtaining a diploma for practice; three pupils enlisted as privates, and one of these distinguished himself by courage and good conduct sufficiently to win a commission; one, while a pupil, left for the bar, and has succeeded; five, after passing, took orders in the Church of England, two in the Church of Rome; ten pupils, and as many after having begun practice, left for different forms of mercantile life at home or in the colonies; three pupils and six young practitioners took to farming. The remaining twenty-seven left the profession for various pursuits, which need not be specified, unless to say that three became homœopathic practitioners, but took to that class no repute for either wisdom or working power.

On the whole, looking over the list, and remembering the characters of those who left the profession for other pursuits, there appears no reason for believing that they have “bettered” themselves. Some have succeeded, some have failed; the result would have been, I think, the same if they had remained in their first calling.

Last comes the melancholy list of deaths, telling that of those who entered nearly 13 per cent. were dead within fifteen years.* Of these forty-one died while yet pupils, including seventeen who died of phthisis, four (at least) of fever caught in the hospital, and two who committed suicide; eighty-seven died after beginning practice, some after attaining great success, some after long and vainly struggling in ill-health; twenty-one died of diseases incurred in their duties; five committed suicide, two of them under circumstances of great disgrace; one was hung, the notorious Palmer, who committed murder at Rugeley—he was an idle, dissipated student, cursed with more money than he had either the wisdom or the virtue to use well.

This, then, is what became of a thousand medical students; and, probably, the same lots in life, or nearly the same, have fallen or will fall to as many thousands more. It would be interesting if, with facts such as these, one could compare our profession with others, as to the chances and degrees of success that it offers to its students. But I know no facts that would serve for a comparison; nor would any be fair unless account were taken of the several amounts of capital in time or money expended upon each pursuit, and the times of reaching and the securities of retaining success in each, and their various social advantages and happinesses. On all these points we are without knowledge.

There might seem more hope of being able to tell the influence of different modes of education on the afterlife of medical students; and thence of deducing some scheme that should greatly increase the successes and decrease the failures. But to do this with accuracy would require many more facts than any one is likely to obtain. Of course, in watching and reflecting on the careers of my pupils, I have come to some strong beliefs on subjects of medical education; but this is not the place for publishing them. Only one I will set down, which may be of use to future pupils, and is justified by some hundreds of personal recollections. In remembering those with whom I was year after year associated, and whom it was my duty to study, nothing appears more certain than that the personal character, the very nature, the will, of each student had far greater force in determining his career than any helps or hindrances whatever. All my recollections would lead me to tell that every student may draw from his daily life a very likely forecast of

* The number agrees so nearly with the general average mortality that it gives no reason for considering the medical profession either less or more healthy than other pursuits, at least in its earlier stages. For according to the “English Life Table, No. 3,” out of any 1,000 males who have attained the age of 19 years, 131 will die within fifteen years.

his life in practice; for it will depend on himself a hundredfold more than on circumstances. The time and the place, the work to be done, and its responsibilities, will change; but the man will be the same, except in so far as he may change himself.

VI.—*Movement for International Economy of Military Expenditure.*

AN address delivered to the International Statistical Congress at the Hague, in September, 1869, by Edwin Chadwick, Esq., C.B. :—

Looking at the total of our respective budgets, for the maintenance of upwards of three millions of men kept under arms, in unproductive and commonly in demoralizing conditions in camps and cantonments, at an estimated collective expenditure of 280,000,000*l.* sterling annually in Europe, I venture to ask whether there is any topic on which the statist and economists of Europe can more usefully direct attention and researches in their several States, than as to the incidents of this vast burthen and the means of economising it. England may do this most befittingly because her declared policy, her position, and her interests, as regards other States of Europe, are no longer offensive but simply defensive. Indeed, it will be admitted on impartial consideration, that her present army, considering the extent of her dominions and her colonies, may be regarded as in great measure a police force for internal security. The British army for all India is not much more numerous than that of France for Algeria alone. For defence, with our great volunteer force, we are secure. Our economical interests, our mutual economical interests, are, however, in the augmentation of the productive power, that is to say, in the augmentation of the purchasing power of our neighbours. But indirectly we pay commercially, more or less, towards our neighbours' armaments, independently of the heavy amount we are made to pay by the augmentation of our own military expenditure, in rivalry of large adjacent offensive forces. If France could be led to reduce her military expenditure, and to devote the capital saved thereby to the real and complete conquest of the soil of France; that is to say, if by drainage and other works so much needed, she were to bring up her production, say of wheat, which averages 15 bushels an acre, to that of England, which is now upwards of 36 bushels, we of England should gain by it; our exports to France and our imports from France would be augmented by it, and it may be submitted to opinion there, that her real military power, which is now dependent on financial power, would not be reduced by it. But it is futile to occupy ourselves with preaching the utopia of universal peace, or proceeding on the basis of the reduction, even the notion, of the mutual of our military efficiency. In England we base our proposals of the economical reform of our military expenditure on the maintenance or the augmentation of military efficiency. Opinion is not yet, I believe, advanced beyond that. Now, I present an example of one topic for examination and consideration on that basis. In a branch of administration, with which I was connected some twenty-five years ago, I advocated the introduction of military and naval exercises in a number of the primary schools of destitute orphan children, maintained at the public expense under our administration. And they were so trained under my principle of the half-school time system. At the period of the last Congress in England I endeavoured to call international attention to the experience obtained in those institutions, one military point of which was that we could impart a complete military and also a naval drill, to upwards of one hundred and thirty boys well, at an expense of keeping and drilling one adult comparatively ill, and we find that when these drilled boys enlist, they are commonly accepted by the non-commissioned officers as having been in the ranks before. Whatsoever differences we may have with military men on army reform questions, we have hardly any on this. We have the highest military authorities with us on this measure as a means, amongst others, of promoting a more extended and higher order of volun-

tary recruitment. Besides good military qualities, the military exercises in the school stages have been found to impart qualities of so high an order for civil work, as to make the general adoption of the exercises worth while as a pure matter of civil economy. The evidence I collected on this topic was promulgated in some parts of Canada and in the United States, and has led to the introduction of the practice there, and its extension to all the primary schools is now a pending question of educational administration. In some parts of Switzerland military exercises have long been made part of elementary school training. Under an enlightened educational administration in France it has recently been obtained that military exercises shall form part of the training in all the Lycées, the secondary schools comprising some 40,000 of children. Now may we not well obtain some statistics of those efforts in the several States, and of how much is yet to be done to extend the practice to all primary schools, to the whole of the rising generations? And may we not then advance to the great economic question, how far the full exercises practicable in the non-productive school stages may serve to reduce the large amount of time now occupied in the productive adult stages of life? Such observations as I have been enabled to collect in England warrant the expectation of a considerable reduction of the period of adult training for military service, more than half of that in use in Prussia, and the greatest proportion of that in use in France; and consequently a great reduction of military expenditure; and that, too, with an increase instead of a reduction of military efficiency—I say an increase of military efficiency, for it is to be observed, what military men used only in old systems, are with us slow to note that the new arms of precision require a higher order of education and intelligence to wield them most effectively. The officers of our training schools, and of the volunteer army, declare that the order of merit in shooting is very much as the order of intelligence of the shooters.

A further question appears to me to arise, for consideration and discussion, viz., whether as a stimulus to serious attention in the schools, exemptions, or reductions of the periods of forced service may not be shot for? Prussia has, I understand, made a good advance in that direction, by allowing reductions and exemptions from forced service to be competed for on proof of attainments. In England, economical opinion, as elicited at late discussions at our Society of Arts in London, points at the substitution of a popular and numerous army, with a scientific cadre, on the basis of the Swiss army, for the less numerous but far more expensive standing army. Mr. Henry Cole showed that, on the basis of the Swiss army, and with a good scientific cadre, we could obtain a more popular army of a million of men for ten millions of money, than that standing army for which we now pay fifteen. We hope that popular opinion will support our present Prime Minister, Mr. Gladstone, in effecting in that direction important economies, which are needed in our financial condition. The progress of constitutional government in France, and on the continent, will, we may trust, favour the substitution of economical popular armies for large expensive standing armies. And in favour of this policy, and of basing military force on a higher order of education and intelligence, which will more readily adapt itself to the great changes which science is making in war, economists may observe, what old military men are very slow to acknowledge, that whilst the new arms of long range and precision, and penetrating power and rapidity, give one to offence, they give two and more to defence. We have recently had some decisive experimental proofs of that with artillery. Mr. Whitworth's smallest new gun, a 3-pounder, has a longer range than the heaviest of the old field guns in our service. Asking one of our old generals how it would have been had that gun been available for Waterloo, he answered that that battle could not have been fought with front lines within half the range of its shell, and with the necessity of keeping reserves at such distances to be out of its reach, that they could not be brought up over the open plain. A military writer of an important article in the *Journal des Economistes*, adduces military reasons to show that with the new arms of precision, an army of 100,000 men, trained to their use, might defend France effectually against invasion. Little Belgium is, by the new science made big, and may now do the like, and talk tall as to with whom she chooses to cast

her lot. So little Holland is by the new arms of defence made great, and may keep herself to herself, or dispose of herself as she pleases.

In respect to offensive naval warfare, I may mention, that my friend Mr. Whitworth (who always does more than he says he will do), says he has now got a gun which, with a hundredweight of powder, will throw a shell of fifteen hundredweight more than five miles with superior accuracy, that will penetrate 12-inch armour plates. Little Holland, therefore, with one such gun in a small and quick moving boat, which is a relatively small mark, may keep at a respectable distance our large "Warrior," or the large and slower "La Gloire" of large France, or the small boat may send an enormous and fatal shell, which will penetrate the 6-inch armour plates of either. Other existing guns will indeed go through all existing armour plating. Science places the war administrations of large countries in the position of having incurred enormous useless expense for what is like a return to plate armour for the foot soldier, or for the cavalry soldier, as against the new small arm, the Whitworth rifle, which with a steel bolt will go through three men in armour—three of the heaviest armed cuirassiers. Indeed, for that matter, our military reporter on the small arms at the international exhibition admits, in effect, that he who now flourishes a sword, flourishes a folly for combat against a 6-shooting revolver. Science suppresses the old panoply of war, and makes fools of sabreurs. One other economical topic I will notice in the way of illustration. It is admitted that the future of war, since men will not readily be got to stand up to be mowed down as heretofore by these new guns, small and large, of long range and precision, will be very much a war of earth work and of engineering. Now it is proved by our Indian and other experience, that officers as well as privates are the better prepared for such warfare who are the most occupied in civil works in time of peace. Sweden, I believe, affords an important example of a large economy of military expenditure, by the extensive occupation of her army in civil work. Even France, to my knowledge, has recently afforded a brilliant example of the kind, by the occupation of a portion of her army in Algeria with the drainage and improvement of land for civil as well as for military occupation, has removed fever nests, and reduced the death-rate of her army there to one-fifth of what it was, and has set a good example for our use in India, as shown by an English military commission. Is it not then becoming of statisticians and economists, representatives of international opinion and interests, to collect, examine, and discuss, the statistics of such important economies? The Congress did enter somewhat into military questions, those chiefly of military hygiene in London, where our lamented colleague, Dr. Boudin, of France, presented very valuable information on the sanitary means of economising military force, now in very successful progress. I had the honour at the Congress of the Association for the Promotion of Social Science, to read a paper on the need of better care of the sanitary condition of our soldiers in India for the maintenance of our force there. This led to the appointment of the army sanitary commission for India, which has led to large reductions of the death-rates there, and to works of great importance for the benefit of the people of India. A special congress, on military hygiene chiefly, held at Geneva, was not without international fruit, as it led to an agreement to the mutual recognition of the destructive dress of medical officers, for their service in battle. Indeed the great Emperor of Russia—the liberator of the serfs—in whose domains we may hold our next Congress, has taken one step for an international agreement for the reduction of the horrors of war, by an agreement not to use shell with small arms, and thus avoid horrible and unnecessary mutilations. As it may be due that I should submit notices of definite topics for consideration, I beg respectfully to submit the following. The resolutions moved were that the Congress should move for the collection of statistics from the respective States, as to the extent to which military exercises had been introduced into schools and the results; as to the extent to which reductions of the time of military service, or exemption for them, had been allowed on competitions or proof of capacity; as to the extent to which the scientific cadres, or private soldiers, had been employed on civil work, or in private service.

The following gentlemen supported the views of Mr. Chadwick in the discussion following, viz., Mr. Ruggles, Mr. Vischers, Mr. W. T. Newmarch, Mr. Manwirth, Dr. Berg, Mr. Valpy, and Mr. Van Karnebeck.

VII.—*Matriculation and Honour Lists, 1832-68.*

THE following appears in *Macmillan's Magazine* for December, 1869:—

“Speaking roughly, not more than one man in three goes in for honours in any ‘school’ at the degree examination; and it is remarkable that, after considerable fluctuation, the proportion is nearly the same as it was thirty years ago, though in 1853 the new and, as it was thought, attractive subjects of natural science and modern history were added to the curriculum.

“As this point is controverted, it will be well to give the figures from which a conclusion is to be drawn.

“The number of classmen must be compared with the number of matriculations four years earlier, the examination taking place about four years after entrance:—

<i>The Yearly Average of Matriculations in—</i>		<i>Of Names in the Class Lists in—</i>	
1832-36 was	374	1836-40 was	131
'37-41 „	411	'41-45 „	121
'42-46 „	403	'46-50 „	117
'47-51 „	406	'51-55 „	149
'52-56 „	420	'56-60 „	147
'57-61 „	408	'61-65 „	130
'62-64 „	470	'66-68 „	161

“The numbers in the modern history school are steadily increasing; in the mathematical school, diminishing; in natural science, well nigh stationary; in ‘literæ humaniores,’ fluctuating. Of the total average of 161 from 1865 to 1868, 88 belong to literæ humaniores, 49 to modern history, 14 to mathematics, 10 to natural science. In the earlier lists, from 20 to 30 are in mathematics, the remainder in literæ humaniores.

“‘The midway examination, called Moderations, in which, on the classical side, nothing beyond the translation of a few Latin and Greek books and some indifferent composition, is required, attracts an increasing number of men. In 1855 101 gained classical honours; in 1861, 129; in 1868, 140. But the standard is that of schoolboy’s work. Mathematical honours are also plentifully awarded.’—*Undergraduates’ Journal*, 25th October.

“The *Undergraduates’ Journal* is great upon the sermons; it puts them before the athletics, and in larger type. Not an insignificant phenomenon this, altogether.”

VIII.—*The Tyne: Progress of Shipping Entries, 1854-68.*

“The River Tyne Improvement Commissioners have published some interesting statistics showing the increase of tonnage on that river since 1854, and it marks a remarkable transition in the carrying business of the country from vessels of a smaller to those of a larger class, as well as the development of the trade of the

Tyne in consequence of the great improvements made in that river by the river commissioners. The following is the statement showing the number of vessels clearing from the Tyne, the aggregate register tonnage thereof, and the average size of vessels for each year from 1854 to 1868 inclusive, as per returns of collectors of customs:—

Year.	Number of Vessels.	Tonnage.	Average Size of Vessels.
1854.....	19,096	2,849,680	149½
'55.....	18,152	2,791,371	154
'56.....	18,546	2,898,453	156½
'57.....	19,449	3,064,040	158
'58.....	19,190	3,001,800	156½
1859.....	18,823	3,060,145	163
'60.....	18,990	3,120,265	164½
'61.....	19,371	3,196,781	165
'62.....	19,336	3,171,145	164
'63.....	18,858	3,213,375	170½
1864.....	18,410	3,491,948	190
'65.....	19,663	4,037,422	205½
'66.....	19,416	4,171,538	214½
'67.....	18,949	4,221,852	222½
'68.....	18,910	4,076,084	215½

“ The following Clearances Outwards for some other great ports of the country in 1868 (extracted from a parliamentary return issued this year), may be useful for comparison, viz.:—

Ports.	Vessels.	Tonnage.	Average Tonnage.
The Thames	15,748	3,881,578	246
„ Wear	13,013	2,313,676	178
„ Mersey	12,186	4,573,255	375
Cardiff.....	11,618	2,180,125	188
The Tyne	18,910	4,076,084	216

“ A statement showing the clearances from the Tyne during eight years, of vessels above 500 tons, classified according to different sizes:—

	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.
Above 1,000 tons register	8	11	19	43	72	58	108	77
900 and under 1,000	6	7	16	14	22	29	35	28
800 „ 900	92	92	110	85	89	83	102	114
700 „ 800	16	20	36	95	81	123	143	147
600 „ 700	48	62	58	79	94	122	109	130
500 „ 600	76	102	183	659	1,153	1,284	1,256	1,105
	246	294	422	975	1,511	1,699	1,753	1,601

“ During eighteen years, ending with 1868, the commissioners dredged no less than 29,724,221 tons of sand and mud out of the river, and have entirely removed the bar from the mouth of the Tyne.”

IX.—*Management of Towns in the United States.*

THE following information is given by Dr. Jarvis, of Dorchester, Massachusetts, a valued honorary member of the Society :—

It is the policy of most of the States, especially those of the north, to leave as much of the local administration as possible to be determined by the people in their public assemblies. At these meetings they vote the taxes for schools, roads, poor, &c.

But even at these meetings of the whole people, no business can be legally transacted, unless it has been previously advertised and made known, under the authority of the select men, by warrants, such as these which I send, specifying each proposition to be brought before the meeting, and posted up in several public places in the town, or distributed to every family, a certain number of days previous to the meeting.

“ The select men shall insert in the warrant all subjects which may in writing be requested of them by ten or more voters in the town.”

By law of the United States, the election of electors of President is held on the first Tuesday in November every fourth year.

By law in this State, the governor, senators, and representatives are chosen on the same day in every year.

The annual meetings for choice of town officers, are held by law in this State in February, March, or April. Most towns hold this election on the first Monday in March.

In this town, all town officers are chosen at the March meeting. Money for all town purposes is raised at a meeting on the first Monday in April.

Besides these three regular town meetings in March, April, and November, there are special town meetings called for special purposes, whenever the select men think proper to call it, or whenever a certain number of voters request them to do so.

At all these meetings “ every male citizen of 21 years of age and upwards (except paupers and persons under guardianship, and persons excluded by Articles 20 of the Amendment of the Constitution, requiring ability to read ; and 23, requiring residence of foreigners within the United States, two years after naturalisation) who has resided within the State one year, and within the town, in which he claims to vote, six months next preceding a meeting for the transaction of town affairs ; and who has paid by himself, or his parent, master, or guardian, a State or county tax, which has been assessed upon him, within two years next preceding such meeting in any town ; and every citizen who is by law exempted from taxation, and in all other respects qualified as aforesaid, shall have a right to vote at such meetings upon all questions concerning town affairs.”

The same conditions are required here “ in the election of city, town, county, or State officers, or of representatives to Congress, and of electors of President and Vice-President ” of the United States.

In every town the select men are required to prepare and post up in public places a list of all the voters in the town, and any one whose name is omitted, can go before the select men with his proofs of right to vote. If they find them sufficient, they must put his name on the list, and none can vote unless he is so inscribed.

In this town there are about 2,100 or 2,200 voters. But all do not vote—some are sick, some old, some absent from the town, some detained by business, some indifferent.

The presidential election being usually an occasion of great political interest, draws out the largest proportion of the voters. Last November, 1,680 voted in Dorchester—1,256 republicans for General Grant, and 424 democratic for Seymour. This is about 75 per cent. of all entitled to vote. At the election of town officers

in March, less than 1,000 voted. At a later meeting called for a special purpose, for discussion and determination of a matter of interest, somewhat less than 800 were present. At the April meeting, to raise money for all town purposes, schools, roads, &c., less than 400 were present and voted 208,000 dollars.

In 1865, when our last census was taken, 19·4 per cent. of all the inhabitants of Massachusetts were voters, and 88·6 per cent. of the males over 21. The number over 21 not voters, 11·4 per cent., included foreigners not naturalised, paupers, &c.

The qualifications of voters are determined by each State for itself, and consequently they differ, but not widely. Some States admit every male over 21 present, however short his residence. Some States extend this privilege only to whites. The new article of the national constitution proposed by Congress, removes the objection of colour. This must be adopted by two-thirds of the State Legislatures before it becomes a law. Probably it will be accepted by the requisite number of States and more.

Female suffrage is attracting interest, and in some parts of the country a great interest. This sentiment is gaining, and not unlikely it will be accepted by some of our local Governments in course of a few years, and ultimately it may find favour in all.

X.—*Australasian Gold.*

FROM the *Times*:—

“The average number of gold miners employed in Victoria, in 1868, was 63,181, being a decrease of 2,676 upon the corresponding average for 1867. The average earnings of each man last year were 104*l.* 18*s.* 8*d.*, as compared with 87*l.* 1*s.* 7*d.* in 1867. There are 2,651 ascertained quartz reefs, and 886,228 tons of quartz were crushed in 1868. The average yield of gold was something over half-an-ounce to the ton, while the cost of crushing ranged from 2*s.* 6*d.* to 1*l.* 10*s.* per ton. The extent of auriferous land opened up by gold miners in Victoria is 882 square miles, and the value of the machinery and mining plant employed was estimated last year at 2,150,432*l.*

“The total area of the land held as claims was 100,942 acres, of which nearly one-third was last year lying idle; the computed value of the whole of the claims was, last year, 8,869,504*l.* Twelve new gold fields were discovered last year, and 329 new companies, with a nominal capital of 3,719,198*l.*, were registered during 1868.

“The aggregate value of the gold exported from Victoria to the close of 1868, was 147,342,767*l.* The total quantity of gold exported from Queensland in the six months ending 3rd June, was 67,080 oz., or at the rate of 11,180 oz. per month. If the exports continue at the same rate for the remainder of the year, they will amount in value to upwards of 500,000*l.* for the whole of 1869. The exports for the second quarter of this year showed, however, the slight decline of 657 oz.

“The immense wealth of the Thames gold fields, in the northern island of *New Zealand*, has given a great stimulus to gold prospecting in other districts of that colony. Thus, in Taranaki, Napier, and Wellington prospecting parties are at work, and substantial success is confidently anticipated. Although gold-bearing quartz has not yet been discovered in the province of Canterbury, the existence of extensive reefs on Banks’s Peninsula has been clearly proved, and these will be shortly tested. Prospecting parties are out in the southern, western, and northern parts of the province, and a thorough exploration, at any rate, will be the result.”

XI.—*Opium in China.*

FROM the *Times*:—

“ It appears from this year’s (1869) consular reports from China, that the consumption of opium in that empire is increasing, and that there is an increased growth of opium in China itself. Early in the year an imperial decree was issued, strictly prohibiting the cultivation of the poppy plant in the Chinese empire, and alleging that there would be danger of its interfering with the growth of food, and causing a scarcity of the means of subsistence; the apprehension of loss of tariff duty by a lessened importation of Indian opium may, perhaps, have been an influential reason for the decree. It threatens offenders with merited punishment, but attaches no specific penalty to disobedience; and it is thought that this decree will have no more effect than that of 1865 to the same purport, and that it will most likely be chiefly used by officials as an occasion for extorting money from the pockets of producers.

“ There is evidence of extensive poppy cultivation in several parts of China. It has spread rapidly within the last few years in the vast region of Eastern Mongolia and Northern Manchuria, and is thence brought down to the coast, competing with Indian opium in the Newchang market. Opium is grown also in several southern provinces. It has been grown for years in the extreme south-west, in the province of Yunnan, the larger proportion of which has thrown off its allegiance, and is now practically an independent kingdom, governed by a Mahomedan, named Tu Wen-hsin, said to be styled by his subjects the ‘Hsi-Mi-Kuo-Wang,’ or ‘King of the Consolidated West,’ and who has established his court at Taili-fu, not far from the frontier of Burmah, called by the Chinese ‘Mien-tien.’ Mr. Mongan, the British consul at Tien-tsin, states that opium is brought into that port either crude or prepared. In the former state it is generally spoken of as ‘tu,’ earth, or clay, from its resemblance to lumps or cakes of common clay; and the native, as distinguished from the foreign, which is termed ‘yang-tu,’ or foreign earth, is called ‘hsi-tu,’ or western earth, a name which seems to have a geographical reference to producing provinces. Prepared opium, called ‘ya-pieu-kao,’ is at Tien-tsin generally composed of foreign and native drug boiled down, and often largely adulterated with glutinous substances, such as a decoction of the berries of a leguminous tree called the ‘huai-shu,’ which grows abundantly in that part of the country. In quality some of the Chinese opium is not much below Malwa; but it is inferior in strength and flavour, and smokers prefer the Indian drug, although its price may be double that of the native; and in fact, the latter is chiefly used for mixing with the former, seven-tenths foreign to three-tenths native.”

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—QUARTER ENDED JUNE, 1869.

BIRTHS AND DEATHS—QUARTER ENDED SEPTEMBER, 1869.

A.—*Serial Table of MARRIAGES, BIRTHS, and DEATHS, returned in the Years 1869-63, and in the QUARTERS of those Years.*

Calendar YEARS, 1869-63:—Numbers.

Years.....	'69.	'68.	'67.	'66.	'65.	'64.	'63.
Marriages No.	—	176,729	179,154	187,776	185,474	180,387	173,510
<i>Births</i> „	—	786,156	768,349	753,870	748,069	740,275	727,417
Deaths „	—	480,677	471,073	500,689	490,909	495,531	473,837

QUARTERS of each Calendar Year, 1869-63.

(I.) MARRIAGES:—*Numbers.*

<i>Qrs. ended last day of</i>	'69.	'68.	'67.	'66.	'65.	'64.	'63.
March..... No.	37,713	36,670	36,441	37,579	36,807	37,988	35,528
June „	43,071	45,226	45,589	48,577	45,827	44,599	44,146
September „	—	43,480	44,086	46,257	45,852	44,675	41,932
December „	—	51,353	53,038	55,363	56,988	53,125	51,904

(II.) BIRTHS:—*Numbers.*

<i>Qrs. ended last day of</i>	'69.	'68.	'67.	'66.	'65.	'64.	'63.
March..... No.	204,055	198,594	194,763	196,753	194,130	192,947	186,341
June „	188,459	202,892	199,660	192,437	192,988	188,835	189,340
September „	190,132	192,467	190,782	179,086	181,941	181,015	173,439
December „	—	192,203	183,144	185,594	179,010	177,478	178,297

(III.) DEATHS:—*Numbers.*

<i>Qrs. ended last day of</i>	'69.	'68.	'67.	'66.	'65.	'64.	'63.
March..... No.	133,437	120,095	134,008	138,136	140,410	142,977	128,096
June „	118,849	109,984	112,355	128,551	115,892	116,880	118,121
September „	114,654	130,502	108,513	116,650	113,362	112,223	112,504
December „	—	120,096	116,197	117,352	121,245	123,451	115,116

*Annual Rates of MARRIAGES, BIRTHS, and DEATHS, per 1,000 PERSONS
LIVING in the Years 1869-63, and the QUARTERS of those Years.*

Calendar YEARS, 1869-63:—General Ratios.

YEARS.....	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
Estmtd. Popln. of England in thousands in middle of each Year....	21,870	—	21,649	21,430	21,210	20,991	20,772	20,554
Persons Mar- ried	—	16·92	16·32	16·72	17·70	17·68	17·36	16·88
Births	—	35·34	36·31	35·85	35·54	35·64	35·64	35·39
Deaths.....	—	22·48	22·20	21·98	23·61	23·39	23·86	23·05

QUARTERS of each Calendar Year, 1869-63.

(I.) PERSONS MARRIED:—Ratio per 1,000.

<i>Qrs. ended last day of</i>	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
March	14·04	14·09	13·64	13·84	14·42	14·28	14·72	14·08
June.....	15·82	17·20	16·78	17·08	18·40	17·54	17·24	17·26
September	—	16·37	15·92	16·30	17·28	17·32	17·04	16·16
December	—	19·89	18·76	19·56	20·64	21·46	20·22	19·96

(II.) BIRTHS:—Ratio per 1,000.

<i>Qrs. ended last day of</i>	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
March	37·98	36·85	36·94	37·00	37·77	37·65	37·40	36·91
June.....	34·61	36·65	37·64	37·42	36·44	36·92	36·51	37·00
September	34·45	34·04	35·23	35·28	33·46	34·34	34·53	33·43
December	—	33·79	35·09	33·78	34·58	33·70	33·76	34·28

(III.) DEATHS:—Ratio per 1,000.

<i>Qrs. ended last day of</i>	'69.	Mean '59-68.	'68.	'67.	'66.	'65.	'64.	'63.
March	24·84	25·36	22·34	25·46	26·52	27·23	27·72	25·38
June.....	21·83	22·03	20·40	21·06	24·34	22·17	22·60	23·08
September	20·77	20·63	23·89	20·06	21·79	21·40	21·41	21·69
December	—	21·90	21·93	21·43	21·87	22·83	23·49	22·13

B.—*Comparative Table of CONSOLS, PROVISIONS, PAUPERISM, and TEMPERATURE in each of the Nine QUARTERS ended September, 1869.*

1	2	3	4	5		6	7	8		9	10
Quarters ending	Average Price of Consols (for Money).	Average Rate of Bank of England Dis- count.	Average Price of Wheat per Quarter in England and Wales.	Average Prices of Meat per lb. at Leadenhall and Newgate Markets (by the Carcase), with the <i>Mean</i> Prices.		Average Prices of Potatoes (York Regents) per Ton at Waterside Market, Southwark.	Pauperism.		Mean Tem- pera- ture.		
				Beef.	Mutton.		Quarterly Average of the Number of Paupers relieved on the <i>last day</i> of each week.*				
							In-door.	Out-door.			
1867	£		<i>s. d.</i>	<i>d. d. d.</i>	<i>d. d. d.</i>	<i>s. s. s.</i>			°		
Sept. 30	94 $\frac{4}{8}$	2·2	65 4	4 $\frac{3}{4}$ —6 $\frac{3}{4}$ 5 $\frac{3}{4}$	5—7 6	100—155 127	129,860	743,965	59·7		
Dec. 31	94 $\frac{3}{8}$	2·0	67 11	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	4 $\frac{1}{2}$ —6 $\frac{1}{2}$ 5 $\frac{1}{2}$	110—155 132	145,886	771,754	42·5		
1868											
Mar. 31	93	2·0	72 2	4 $\frac{1}{4}$ —6 $\frac{1}{2}$ 5 $\frac{3}{8}$	4 $\frac{1}{4}$ —6 $\frac{1}{2}$ 5 $\frac{3}{8}$	125—170 147	159,716	860,165	41·4		
June 30	94 $\frac{3}{8}$	2·0	71 10	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	4 $\frac{3}{4}$ —7 5 $\frac{7}{8}$	130—170 150	142,588	800,944	55·8		
Sept. 30	94 $\frac{2}{8}$	2·0	59 1	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	4 $\frac{3}{4}$ —6 $\frac{3}{4}$ 5 $\frac{3}{4}$	120—175 147	138,284	778,804	63·9		
Dec. 31	94 $\frac{3}{8}$	2·4	51 11	4 $\frac{1}{2}$ —7 5 $\frac{3}{4}$	4 $\frac{1}{2}$ —6 $\frac{3}{4}$ 5 $\frac{5}{8}$	70—140 105	152,733	797,546	45·1		
1869											
Mar. 31	92 $\frac{7}{8}$	3·0	50 2	4 $\frac{3}{4}$ —7 $\frac{1}{4}$ 6	4 $\frac{3}{4}$ —7 $\frac{1}{2}$ 6 $\frac{1}{8}$	70—140 105	162,308	850,883	41·3		
June 30	93 $\frac{1}{8}$	4·2	45 7	4 $\frac{3}{4}$ —7 $\frac{1}{2}$ 6 $\frac{1}{8}$	5—7 $\frac{3}{4}$ 6 $\frac{3}{8}$	60—130 95	145,094	816,260	52·0		
Sept. 30	93	2·9	50 11	4 $\frac{3}{4}$ —7 $\frac{1}{2}$ 6 $\frac{1}{8}$	5 $\frac{1}{4}$ —7 $\frac{1}{2}$ 6 $\frac{3}{8}$	95—125 110	137,599	780,398	61·4		

* Exclusive of vagrants and pauper lunatics in asylums.

C.—*General Average Death-Rate Table:—Annual Rate of Mortality to 1,000 of the Population in the Eleven Divisions of England.*

Divisions.	Average Annual Rate of Mortality to 1,000 Living in						
	Ten Years, 1851-60.	1868.			1869.		
		Year.	Summer Quarter.	Autumn Quarter.	Winter Quarter.	Spring Quarter.	Summer Quarter.
I. London	23·63	23·57	24·58	24·52	25·43	22·25	24·31
II. South-Eastern counties	19·55	18·91	21·18	18·31	21·39	18·71	18·45
III. South Midland „	20·44	19·81	23·08	19·00	21·92	19·01	18·94
IV. Eastern counties	20·58	19·57	21·48	19·31	22·42	20·96	18·41
V. South-Western counties	20·01	18·12	17·04	18·29	21·77	20·62	17·05
VI. West Midland „	22·35	21·05	23·29	20·39	23·58	20·06	18·75
VII. North Midland „	21·10	21·26	24·09	20·48	24·35	21·74	20·02
VIII. North-Western „	25·51	26·14	28·80	25·54	28·13	23·63	23·23
IX. Yorkshire	23·09	24·66	27·99	25·60	28·08	24·79	23·87
X. Northern counties	21·99	24·12	25·35	24·39	26·05	22·63	21·34
XI. Monmouthshire and Wales	21·28	19·70	18·45	18·35	23·12	22·07	16·92

Note.—The mortality for the year 1868 is the mean of the quarterly rates.

D.—*Special Average Death-Rate Table:—ANNUAL RATE of MORTALITY per 1,000 in TOWN and COUNTRY DISTRICTS of ENGLAND in each Quarter of the Years 1869-67.*

	Area in Statute Acres.	Population Enumerated. 1861.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
				1869.	Mean '59-68.	1868.	1867.
In 142 Districts, and 56 Sub-districts, comprising the <i>Chief Towns</i>	3,287,151	10,930,841	{ March .. 26·55 June 22·78 Sept. 23·32 Dec. —	26·55	27·24	24·03	27·23
				22·78	23·39	22·20	21·99
				23·32	22·90	26·49	22·47
				—	24·31	24·15	23·92
			Year	—	24·46	24·22	23·90
In the remaining Districts and Sub- districts of Eng- land and Wales, comprising chiefly <i>Small Towns</i> and <i>Country Parishes</i> }	34,037,732	9,135,383	Year	—	20·00	19·40	19·54
			{ March .. 22·56 June 20·56 Sept. 17·36 Dec. —	22·56	23·02	20·12	23·16
				20·56	20·32	18·04	19·84
				17·36	17·79	20·44	16·93
				—	18·88	18·98	18·21

Note.—The three months, January, February, March, contain 90, in leap year 91 days; the three months, April, May, June, 91 days; each of the last two quarters of the year 92 days. For this inequality a correction has been made in the calculations, also for the difference between 365 and 365·25 days, and 366 and 365·25 days in leap year.

E.—*Special Town Table:—POPULATION; BIRTHS, DEATHS; MEAN TEMPERATURE and RAINFALL in last Summer Quarter, in Fourteen Large Towns.*

Cities, &c.	Estimated Population in the Middle of the Year 1869.	Births in 13 Weeks ending 2nd Oct., 1869.	Deaths in 13 Weeks ending 2nd Oct., 1869.	Annual Rate to 1,000 Living during the 13 Weeks ending 2nd Oct.		Mean Temperature in 13 Weeks ending 2nd Oct., 1869.	Rainfall in Inches in 13 Weeks ending 2nd Oct., 1869.
				Births.	Deaths.		
Total of 14 large towns....	6,546,587	57,318	41,078	35·14	25·18	58·9	7·39
London	3,170,754	27,444	19,207	34·74	24·31	61·5	5·23
Bristol	169,423	1,481	917	35·08	21·72	60·2	8·88
Birmingham	360,846	3,092	1,921	34·39	21·37	60·0	7·72
Liverpool	509,052	4,487	3,864	35·38	30·47	58·8	8·21
Manchester	370,892	3,179	2,711	34·40	29·34	—	—
Salford	119,350	1,188	771	39·95	25·93	58·5	10·52
Sheffield	239,752	2,250	1,532	37·67	25·65	59·1	6·53
Bradford	138,522	1,367	848	39·61	24·57	58·8	5·72
Leeds	253,110	2,587	1,717	41·02	27·23	59·6	6·21
Hull	126,682	1,035	796	32·79	25·22	57·3	5·43
Newcastle-on-Tyne	130,503	1,241	770	38·17	23·68	—	—
Edinburgh	178,002	1,616	1,198	36·44	27·01	57·0	8·00
Glasgow	458,937	4,327	3,152	37·84	27·57	57·1	10·02
Dublin	320,762	2,024	1,674	25·33	20·95	59·4	6·18
Paris	1,889,842 (1867.)	—	10,650	—	22·62	—	—
Berlin	702,437 (1869.)	7,475	5,992	42·71	34·24	62·8	—
Vienna	605,200	—	3,976	—	26·37	65·7	—

F.—*Divisional Table*:—MARRIAGES Registered in Quarters ended 30th June, 1869-67; and BIRTHS and DEATHS in Quarters ended 30th September, 1869-67.

1 DIVISIONS. (England and Wales.)	2 AREA in Statute Acres.	3 POPULATION, 1861. (Persons.)	4 5 6 MARRIAGES in Quarters ended 30th June.		
			1869.	1868.	1867.
ENGLD. & WALES....Totals	37,324,883	No. 20,066,224	No. 43,071	No. 45,226	No. 45,589
I. London	77,997	2,803,989	7,445	8,011	8,246
II. South-Eastern	4,065,935	1,847,661	3,662	3,852	3,734
III. South Midland	3,201,290	1,295,515	2,038	2,200	2,225
IV. Eastern	3,214,099	1,142,562	1,599	1,695	1,706
V. South-Western	4,993,660	1,835,714	3,260	3,316	3,333
VI. West Midland	3,865,332	2,436,116	4,991	5,217	5,202
VII. North Midland	3,540,797	1,289,380	2,884	3,090	3,146
VIII. North-Western	2,000,227	2,935,540	7,131	7,640	7,494
IX. Yorkshire	3,654,636	2,015,541	4,503	4,654	4,873
X. Northern	3,492,322	1,151,372	2,874	2,864	2,791
XI. Monmthsh. & Wales	5,218,588	1,312,834	2,684	2,687	2,839

7 DIVISIONS. (England and Wales.)	8 9 10 BIRTHS in Quarters ended 30th September.			11 12 13 DEATHS in Quarters ended 30th September.		
	1869.	1868.	1867.	1869.	1868.	1867.
ENGLD. & WALES....Totals	No. 190,132	No. 192,467	No. 190,782	No. 114,654	No. 130,502	No. 108,513
I. London	27,444	26,979	27,744	19,207	19,149	16,567
II. South-Eastern	16,761	16,908	16,505	9,548	10,825	8,873
III. South Midland	11,532	11,868	11,314	6,439	7,810	6,169
IV. Eastern	9,062	9,385	9,412	5,414	6,302	5,034
V. South-Western	14,125	14,215	14,380	8,006	7,989	7,419
VI. West Midland	22,957	23,560	23,528	12,850	15,754	12,568
VII. North Midland	11,967	11,960	11,492	6,829	8,172	6,234
VIII. North-Western	30,296	31,024	30,675	19,726	24,054	19,482
IX. Yorkshire	21,493	21,200	21,189	13,391	15,520	12,379
X. Northern	12,628	12,983	12,405	7,152	8,350	7,501
XI. Monmthsh. & Wales	11,867	12,385	12,138	6,092	6,577	6,287

G.—General Meteorological Table, Quarter ended September, 1869.

[Abstracted from the particulars supplied to the Registrar-General by JAMES GLAISHER, ESQ., F.R.S., &c.]

1869. Months.		Temperature of									Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.		
		Air.			Evaporation.		Dew Point.		Air— Daily Range.						Water of the Thames
		Mean.	Diff. from Aver- age of 98 Years.	Diff. from Aver- age of 28 Years.	Mean.	Diff. from Aver- age of 28 Years.	Mean.	Diff. from Aver- age of 28 Years.	Mean.	Diff. from Aver- age of 28 Years.					
July ...	64·5	+3·1	+2·7	59·9	+2·5	56·2	+2·6	22·5	+1·5	64·3	In. ·453	In. +·040	Gr. 5·0	Gr. +0·4	
Aug. ...	60·8	+0·1	−0·5	56·1	−1·3	52·1	−1·7	19·9	+0·3	62·5	·389	−·029	4·4	−0·2	
Sept. ...	59·0	+2·5	+1·7	55·1	+1·0	51·6	+0·4	16·2	−2·3	58·3	·382	+·001	4·3	+0·1	
Mean ...	61·4	+1·9	+1·3	57·0	+0·7	53·3	+0·4	19·5	−0·2	61·7	·408	+·004	4·6	+0·1	

1869. Months.		Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Hori- zontal Move- ment of the Air.	Reading of Thermometer on Grass.				
		Mean.	Diff. from Aver- age of 28 Years.	Mean.	Diff. from Aver- age of 28 Years.	Mean.	Diff. from Aver- age of 28 Years.	Amnt.	Diff. from Aver- age of 54 Years.		Number of Nights it was			Low- est Read- ing at Night.	High- est Read- ing at Night.
											At or below 30°.	Be- tween 30° and 40°.	Above 40°.		
July ...	75	0	In. 29·928	+·126	Gr. 527	− 1	In. 0·6	−2·0	Miles. 213	0	0	31	° 42·2	° 57·8	
Aug. ...	73	− 4	29·968	+·183	532	+ 3	1·2	−1·2	224	1	3	27	29·5	57·8	
Sept. ...	77	− 4	29·642	−·175	528	− 6	3·1	+0·7	349	0	5	25	30·4	56·5	
Mean ...	75	− 3	29·846	+·045	529	− 1	Sum 4·9	Sum −2·5	Mean 262	Sum 1	Sum 8	Sum 83	Lowest 29·5	Highest 57·8	

Note.—In reading this table it will be borne in mind that the sign (−) minus signifies below the average, and that the sign (+) plus signifies above the average.

The mean temperature of July was 64°·5, being 3°·1 higher than the average of ninety-eight years, lower than the corresponding temperature in 1868 by 3°·0, but higher than in any previous year as far back as 1859.

The mean temperature of August was 60°·8, being 0°·1 higher than the average of ninety-eight years, lower than in 1868 and 1867 by 2°·8 and 1°·2 respectively, but higher than in 1866, 1865, and 1864, when 59°·4, 59°·9, and 59°·6 respectively were recorded.

The mean temperature of September was 59°·0, being 2°·5 higher than the average of ninety-eight years. In 1868 the value recorded was 60°·5; in 1867 and 1866, 57°·6 and 56°·4 respectively.

H.—*Special Meteorological Table, Quarter ended 30th September, 1869.*

1	2	3	4	5	6	7	8	9
NAMES OF STATIONS.	Mean Pressure of Dry Air reduced to the Level of the Sea.	Highest Reading of the Thermo- meter.	Lowest Reading of the Thermo- meter.	Range of Tem- perature in the Quarter.	Mean Monthly Range of Tem- perature.	Mean Daily Range of Tem- perature.	Mean Tem- perature of the Air.	Mean Degree of Hu- midity.
	in.	°	°	°	°	°	°	
Guernsey	29·634	80·5	49·5	31·0	25·2	10·5	59·8	82
Osborne	29·583	87·4	42·8	44·6	38·0	18·3	60·8	83
Barnstaple	29·608	89·0	41·5	47·5	38·8	17·7	61·5	76
Royal Observatory	29·607	90·9	41·2	49·7	42·5	19·5	61·4	75
Royston	29·613	92·4	36·3	56·1	47·9	21·1	60·6	77
Lampeter	29·595	89·8	30·2	59·6	48·9	23·2	58·2	76
Norwich	29·605	85·5	41·3	44·2	38·6	18·2	60·2	76
Derby	29·524	86·0	36·0	50·0	41·3	17·7	59·7	81
Stonyhurst	29·554	86·0	36·0	50·0	39·0	16·4	57·6	80
Leeds	—	94·0	40·0	54·0	44·7	20·6	60·4	71
North Shields	29·631	81·0	40·3	40·7	33·6	14·0	56·9	76

10	11	12	13	14	15	16	17	18
NAMES OF STATIONS.	WIND.					Mean Amount of Cloud.	RAIN.	
	Mean estimated Strength.	Relative Proportion of					Number of Days on which it fell.	Amount collected.
		N.	E.	S.	W.			
								in.
Guernsey	1·4	9	6	7	9	3·7	28	3·7
Osborne	0·7	6	6	9	10	4·9	25	7·5
Barnstaple	1·4	3	6	11	11	3·7	43	8·1
Royal Observatory	0·5	5	5	9	12	6·1	26	4·9
Royston	—	7	3	9	12	5·6	28	4·4
Lampeter	0·5	5	4	11	11	5·6	39	11·9
Norwich	—	7	5	8	11	—	26	5·7
Derby	—	5	5	8	13	—	36	7·0
Stonyhurst	—	3	3	8	17	6·1	54	14·4
Leeds	1·9	7	4	8	12	6·7	37	5·3
North Shields	1·8	7	4	8	12	5·3	36	4·9

No. II.—SCOTLAND.

MARRIAGES, BIRTHS, AND DEATHS IN THE QUARTER

ENDED 30TH SEPTEMBER, 1869.

.—*Serial Table:—Number of Births, Deaths, and Marriages in Scotland, and their Proportion to the Population, Estimated to the Middle of each Year, during each Quarter of the Years 1869-65 inclusive.*

	1869.		1868.		1867.		1866.		1865.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
<i>1st Quarter—</i>										
Births	28,429	3·54	28,736	3·60	27,969	3·52	28,883	3·66	28,594	3·65
Deaths	20,431	2·54	18,036	2·26	19,981	2·51	19,095	2·42	20,804	2·65
Marriages ..	5,291	0·66	5,287	0·66	5,332	0·66	5,642	0·71	5,416	0·69
Mean Tem- perature }	40°·0		40°·6		36°·5		38°·0		35°·3	
<i>2nd Quarter—</i>										
Births	29,472	3·67	31,025	3·89	30,393	3·83	29,808	3·78	30,318	3·86
Deaths	19,449	2·42	16,928	2·12	17,464	2·20	18,575	2·35	17,074	2·17
Marriages ..	5,596	0·69	5,660	0·71	5,602	0·70	6,034	0·76	5,707	0·72
Mean Tem- perature }	48°·4		51°·0		49°·0		49°·3		51°·5	
<i>3rd Quarter—</i>										
Births	27,646	3·44	28,393	3·56	27,888	3·51	27,204	3·45	27,306	3·48
Deaths	16,532	2·06	16,662	2·09	15,106	1·90	15,470	1·95	15,924	2·02
Marriages ..	4,870	0·60	4,804	0·59	5,047	0·63	5,104	0·64	5,343	0·68
Mean Tem- perature }	56°·4		57°·4		55°·2		54°·4		57°·5	
<i>4th Quarter—</i>										
Births	—	—	27,519	3·45	27,865	3·51	27,772	3·52	26,852	3·42
Deaths	—	—	17,760	2·22	16,473	2·07	18,210	2·30	17,089	2·17
Marriages ..	—	—	6,202	0·77	6,540	0·82	6,908	0·87	7,145	0·91
Mean Tem- perature }	—		41°·5		42°·3		43°·5		43°·4	
<i>Year—</i>										
Population.	—		3,188,125		3,170,769		3,153,413		3,136,057	
Births	—	—	115,673	3·63	114,115	3·59	113,667	3·60	113,070	3·60
Deaths	—	—	69,386	2·17	69,024	2·17	71,350	2·26	70,891	2·26
Marriages ..	—	—	21,853	0·68	22,521	0·70	23,688	0·75	23,611	0·75

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts during the Quarter ending 30th September, 1869, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

	Population.		Total Births.			Illegitimate Births.		
	Census, 1861.	Estimated to Middle of 1869.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,205,481	27,646	3·44	29	2,675	9·7	10·3
131 town districts	1,615,475	1,780,372	16,791	3·77	26	1,558	9·2	10·7
885 rural ,,	1,446,819	1,425,109	10,855	3·04	33	1,117	10·3	9·7

	Population.		Deaths.			Marriages.		
	Census, 1861.	Estimated to Middle of 1869.	Number.	Per Cent.	Ratio. One in every	Number.	Per Cent.	Ratio. One in every
SCOTLAND	3,062,294	3,205,481	16,532	2·06	48	4,870	0·60	164
131 town districts	1,615,475	1,780,372	11,023	2·47	40	3,576	0·80	124
885 rural ,,	1,446,819	1,425,109	5,509	1·54	64	1,294	0·36	275

Note.—The constitution of several of the districts was altered on January 1, 1868; consequently the numbers of the population in the town and rural districts differ somewhat from those of previous years.

III.—*Bastardy Table:—Proportion of Illegitimate in every Hundred Births in the Divisions and Counties of Scotland, during the Quarter ending 30th September, 1869.*

Divisions.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.	Counties.	Per Cent. of Illegitimate.
SCOTLAND	9·7						
Northern	6·3	Shetland	4·1	Forfar	10·1	Lanark	8·7
North-Western	5·5	Orkney	6·1	Perth	11·2	Linlithgow .	7·9
North-Eastern	15·6	Caithness	9·2	Fife	7·2	Edinburgh .	8·8
East Midland..	9·3	Sutherland....	3·5	Kinross	6·2	Haddington	10·4
West Midland.	8·2	Ross and }	3·8	Clackman- }	7·7	Berwick	12·1
South-Western	8·3	Cromarty }		nan		Peebles	16·0
South-Eastern.	9·4	Inverness	7·4	Stirling	9·3	Selkirk	14·9
Southern	14·7	Nairn	6·3	Dumbarton ..	7·1	Roxburgh ..	10·8
		Elgin	17·6	Argyll	8·1	Dumfries	14·6
		Banff	18·9	Bute	4·9	Kirkeud- }	13·1
		Aberdeen	14·6	Renfrew	6·1	bright .. }	
		Kincardine....	17·9	Ayr	8·5	Wigtown	22·2

IV.—*Divisional Table:—MARRIAGES, BIRTHS, and DEATHS Registered in the Quarter ended 30th September, 1869.*

1	2	3	4	5	6
DIVISIONS. (Scotland)	AREA in Statute Acres.	POPULATION, 1861. (Persons.)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
SCOTLAND Totals	19,639,377	3,062,294	4,870	27,646	16,532
I. Northern	2,261,622	130,422	80	821	414
II. North-Western	4,739,876	167,329	108	1,081	587
III. North-Eastern	2,429,594	366,783	443	3,286	1,376
IV. East Midland	2,790,492	523,822	708	4,477	2,669
V. West Midland	2,693,176	242,507	291	1,935	1,248
VI. South-Western	1,462,397	1,008,253	2,266	10,600	6,849
VII. South-Eastern	1,192,524	408,962	756	3,838	2,531
VIII. Southern	2,069,696	214,216	218	1,608	858

No. III.—GREAT BRITAIN AND IRELAND.

SUMMARY of MARRIAGES, in the Quarter ended 30th June, 1869;
and BIRTHS and DEATHS, in the Quarter ended 30th September, 1869.

COUNTRIES.	[000's omitted].		Marriages.	Per 1,000 of Popu- lation.	Births.	Per 1,000 of Popu- lation.	Deaths.	Per 1,000 of Popu- lation.
	Area in Statute Acres.	Popu- lation, 1861. (Persons.)						
		No.	No.	Ratio.	No.	Ratio.	No.	Ratio.
England and } Wales	37,325,	20,066,	43,071	2·1	190,132	9·5	114,654	5·7
Scotland	19,639,	3,062,	5,660	1·9	27,646	9·0	16,532	5·4
Ireland	20,323,	5,799,	5,577	·9	34,058	5·9	18,685	3·2
GREAT BRITAIN } AND IRELAND }	77,287,	28,927,	54,308	1·9	251,836	8·7	149,871	5·2

Note.—The numbers against Ireland represent the marriages, births, and deaths that the local registrars have *succeeded* in recording; but how far the registration approximates to absolute completeness, does not at present appear to be known. It will be seen that the Irish ratios are much under those of England and Scotland.—
ED. S. J.

Trade of United Kingdom, 1869-68-67.—*Distribution of Exports from United Kingdom, according to the Declared Real Value of the Exports; and the Computed Real Value (Ex-duty) of Imports at Port of Entry, and therefore including Freight and Importer's Profit.*

Merchandise (<i>excluding Gold and Silver</i>), Imported from, and Exported to, the following Foreign Countries, &c. [000's omitted.]	First Six Months.					
	1869.		1868.		1867.	
	Imports from	Exports to	Imports from	Exports to	Imports from	Exports to
I.—FOREIGN COUNTRIES:	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland }	6,524,	3,543,	8,487,	2,448,	9,017,	2,627
Central Europe; viz., Prussia, Germany, the Hanse Towns, Holland, and Belgium }	18,321,	18,606,	15,689,	18,145,	17,229,	16,217
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries) }	21,607,	8,083,	20,244,	7,715,	20,973,	8,669
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta }	3,634,	4,141,	3,411,	3,140,	2,193,	3,693
Levant; viz., Turkey, with Wallachia and Moldavia, Syria and Palestine, and Egypt }	10,435,	7,008,	12,239,	6,635,	11,074,	7,321
Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco }	158,	161,	131,	73,	133,	158
Western Africa	538,	452,	705,	446,	605,	405
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorla Islands }	45,	69,	—	96,	14,	59
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands }	1,048,	684,	769,	901,	315,	1,282
South Sea Islands	2,	8,	30,	15,	8,	20
China, including Hong Kong	4,925,	5,418,	4,650,	4,498,	4,569,	3,894
United States of America	21,865,	13,293,	29,559,	10,541,	25,780,	11,951
Mexico and Central America	720,	332,	453,	508,	479,	380
Foreign West Indies and Hayti	1,890,	586,	1,632,	1,361,	2,545,	1,383
South America (Northern), New Granada, Venezuela, and Ecuador }	579,	1,373,	592,	1,241,	653,	1,259
„ (Pacific), Peru, Bolivia, Chili, and Patagonia }	2,449,	1,538,	3,598,	1,242,	3,473,	2,238
„ (Atlantic) Brazil, Uruguay, and Buenos Ayres }	4,589,	4,874,	4,735,	3,455,	4,334,	4,760
Whale Fisheries; Grnld., Davis' Straits, Southn. Whale Fishery, & Falkland Islands }	34,	5,	22,	6,	16,	1
<i>Total—Foreign Countries</i>	99,363,	70,174,	106,946,	62,466,	103,410,	66,317
II.—BRITISH POSSESSIONS:						
British India, Ceylon, and Singapore	13,255,	9,805,	10,065,	12,111,	10,141,	11,542
Austral. Cols.—N. So. W., Vict., and Queensld.	5,607,	4,979,	3,798,	3,738,	5,141,	2,905
„ „ So. Aus., W. Aus., Tasm., and N. Zealand }	1,706,	1,536,	1,528,	1,518,	2,219,	1,392
British North America	529,	2,240,	835,	2,020,	802,	2,393
„ W. Indies with Btsh. Guiana & Honduras }	2,837,	1,234,	3,222,	1,262,	2,642,	1,280
Cape and Natal	1,188,	710,	1,132,	715,	1,178,	1,014
Br. W. Co. of Af., Ascension and St. Helena	234,	337,	187,	272,	186,	330
Mauritius	448,	162,	756,	240,	646,	208
Channel Islands	255,	308,	190,	259,	193,	232
<i>Total—British Possessions</i>	26,059,	21,311,	21,587,	22,135,	23,148,	21,296
General Total	£ 125,422,	91,485,	128,533,	84,601,	126,558,	87,613

IMPORTS.—(United Kingdom.)—First Eight Months (January—August), 1869-68-67-66-65.—Computed Real Value (*Ex-duty*), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.

(First Eight Months.) [000's omitted.] FOREIGN ARTICLES IMPORTED.		1869.	1868.	1867.	1866.	1865.
		£	£	£	£	£
RAW MATLS.— <i>Textile.</i>	Cotton Wool	34,304,	37,306,	39,753,	58,205,	29,944,
	Wool (Sheep's) ..	11,281,	10,410,	12,747,	12,559,	10,388,
	Silk	10,415,	10,977,	10,099,	9,168,	9,541,
	Flax	2,650,	3,079,	2,544,	3,005,	3,048,
	Hemp	2,634,	2,106,	1,623,	2,182,	1,546,
	Indigo	2,420,	2,378,	2,130,	1,851,	1,757,
		63,704,	66,256,	68,896,	86,970,	56,224,
" " <i>Various.</i>	Hides	1,793,	1,748,	1,642,	1,979,	1,634,
	Oils	2,481,	2,325,	2,585,	2,532,	2,206,
	Metals	3,170,	2,905,	2,488,	3,218,	2,724,
	Tallow	1,339,	834,	749,	1,233,	851,
	Timber.....	4,755,	4,274,	3,405,	4,564,	6,213,
		13,538,	12,086,	10,869,	13,526,	13,628,
" " <i>Agricltl.</i>	Guano	960,	1,486,	1,164,	921,	1,686,
	Seeds	1,702,	2,213,	1,587,	1,694,	2,066,
		2,662,	3,699,	2,751,	2,615,	3,752,
TROPICAL &c., PRODUCE.	Tea	5,300,	5,460,	4,942,	6,091,	5,287,
	Coffee	3,151,	3,244,	2,679,	2,457,	2,566,
	Sugar & Molasses	10,640,	9,950,	9,743,	8,756,	8,341,
	Tobacco	646,	973,	917,	1,229,	1,514,
	Rice	1,638,	1,469,	504,	449,	357,
	Fruits	768,	784,	265,	89,	201,
	Wines	3,706,	3,756,	3,202,	3,335,	2,456,
	Spirits	1,384,	1,377,	1,209,	1,294,	1,011,
		27,233,	27,010,	23,461,	23,700,	21,733,
FOOD	Grain and Meal.	20,828,	27,193,	25,581,	18,898,	11,168,
	Provisions	9,372,	7,646,	5,759,	6,210,	6,061,
		30,200,	34,839,	31,340,	25,108,	17,229,
Remainder of Enumerated Articles ...		11,246,	8,672,	4,131,	3,893,	3,104,
TOTAL ENUMERATED IMPORTS		148,583,	152,562,	141,448,	155,812,	115,670,
Add for UNENUMERATED IMPORTS (say)		37,145,	38,140,	37,112,	38,953,	18,917,
TOTAL IMPORTS		185,728,	180,702,	178,560,	194,765,	144,587,

EXPORTS.—(United Kingdom.)—First Nine Months (*January—September*),
1869-68-67-66-65.—Declared Real Value, at Port of Shipment, of Articles
of BRITISH and IRISH Produce and Manufactures Exported from United
Kingdom.

(First Nine Months.) [000's omitted.] BRITISH PRODUCE, &c., EXPORTED.		1869.	1868.	1867.	1866.	1865.
	£	£	£	£	£	£
MANFRS.—Textile. Cotton Manufactures ..	39,459,	39,006,	42,123,	46,100,	33,628,	
„ Yarn	10,484,	10,989,	10,923,	9,927,	7,311,	
Woollen Manufactures	17,671,	14,834,	15,991,	16,790,	14,484,	
„ Yarn	4,465,	4,927,	4,491,	3,290,	3,984,	
Silk Manufactures.....	1,567,	1,653,	1,159,	1,349,	1,445,	
„ Yarn	166,	159,	146,	173,	214,	
Linen Manufactures	5,182,	5,307,	5,781,	7,260,	6,464,	
„ Yarn	1,721,	1,735,	1,917,	1,745,	1,806,	
	80,715,	78,610,	82,531,	86,634,	69,336,	
<i>Sewed.</i> Apparel	1,700,	1,583,	1,588,	2,046,	1,831,	
Haberd. and Millnry.	3,537,	3,423,	3,541,	4,308,	3,644,	
	5,237,	5,006,	5,129,	6,354,	5,475,	
METALS Hardware	3,239,	2,784,	2,934,	3,310,	3,138,	
Machinery	3,745,	3,450,	3,748,	3,354,	3,862,	
Iron	14,713,	11,149,	11,586,	11,289,	9,666,	
Copper and Brass.....	2,515,	2,326,	2,296,	2,203,	2,389,	
Lead and Tin	3,473,	2,987,	2,639,	2,559,	2,058,	
Coals and Culm	3,786,	4,096,	4,034,	3,859,	3,306,	
	31,471,	26,792,	27,237,	26,574,	24,419,	
<i>Ceramic Manufets.</i> Earthenware and Glass	1,993,	1,826,	1,838,	1,821,	1,612,	
<i>Indigenous Mnfrs.</i> Beer and Ale.....	1,417,	1,387,	1,455,	1,153,	1,590,	
Butter	196,	194,	195,	265,	216,	
Cheese	74,	77,	88,	126,	74,	
Candles	128,	162,	150,	176,	77,	
Salt.....	332,	383,	358,	298,	194,	
Spirits	172,	128,	123,	117,	205,	
Soda	1,033,	1,147,	1,229,	1,163,	804,	
	3,352,	3,478,	3,598,	3,698,	3,160,	
<i>Various Manufets.</i> Books, Printed	484,	496,	442,	439,	359,	
Furniture	176,	140,	146,	175,	220,	
Leather Manufactures	1,926,	1,759,	1,349,	1,423,	1,834,	
Soap	163,	192,	217,	170,	133,	
Plate and Watches	372,	277,	299,	308,	304,	
Stationery	352,	304,	283,	279,	291,	
	3,473,	3,168,	2,736,	2,794,	3,141,	
Remainder of Enumerated Articles	9,138,	8,121,	7,870,	7,789,	7,085,	
Unenumerated Articles.....	7,328,	6,703,	6,263,	6,273,	5,490,	
TOTAL EXPORTS	142,707,	133,704,	137,202,	141,937,	119,717,	

SHIPPING. — FOREIGN TRADE. — (United Kingdom.) — First Nine Months
(January—September), 1869-68-67-66.—Vessels Entered and Cleared with
Cargoes, including repeated Voyages, but excluding Government Transports.

(First Nine Months.) ENTERED:—	1869.			1868.		1867.		1866.	
	Vessels.	Tonnage (000's omitted.)	Average Tonnage.	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)	Vessels.	Tonnage (000's omitted.)
<i>Vessels belonging to—</i>	No.	Tons.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Russia	466	159,	341	434	139,	382	132,	350	123,
Sweden	988	169,	171	997	174,	902	159,	858	158,
Norway	3,421	818,	239	3,406	808,	3,047	701,	2,984	696,
Denmark	1,581	193,	122	1,768	201,	1,753	200,	1,669	179,
Prussia and Ger. Sts.	2,819	761,	270	3,110	833,	2,822	723,	3,197	768,
Holland and Belgium	1,548	226,	146	1,445	206,	1,391	187,	1,624	219,
France	1,765	170,	96	1,736	168,	1,852	165,	2,297	212,
Spain and Portugal	402	133,	331	409	141,	369	123,	291	90,
Italy & other Eupn. Sts.	961	359,	374	608	217,	698	223,	915	267,
United States	284	276,	971	392	383,	319	328,	342	357,
All other States	9	4,	444	11	4,	7	3,	12	4,
United Kingdm. & } Depds.	14,244 20,451	3,268, 7,426,	229 363	14,316 19,940	3,274, 6,968,	13,542 19,819	2,944, 6,891,	14,539 20,275	3,073, 6,837,
<i>Totals Entered....</i>	34,695	10,694,	308	34,256	10,242,	33,361	9,835,	34,814	9,910,
CLEARED:—									
Russia	407	148,	364	341	120,	321	115,	315	115,
Sweden	978	166,	169	890	144,	840	137,	788	142,
Norway	2,162	442,	204	1,924	380,	1,695	335,	1,654	323,
Denmark	1,816	209,	115	1,961	215,	1,994	219,	2,689	179,
Prussia and Ger. Sts.	4,076	958,	235	4,447	1,050,	4,152	906,	4,109	847,
Holland and Belgium	1,614	258,	160	1,734	274,	1,552	246,	1,565	255,
France	2,701	320,	118	3,117	338,	3,357	367,	3,123	329,
Spain and Portugal	312	116,	372	381	137,	368	122,	294	92,
Italy & other Eupn. Sts.	1,056	402,	381	734	281,	745	257,	991	318,
United States	340	325,	956	503	470,	424	418,	413	411,
All other States	11	3,	272	13	4,	10	3,	21	8,
United Kingdm. & } Depds.	15,473 24,414	3,346, 8,563,	216 351	16,045 24,768	3,413, 8,323,	15,458 23,824	3,125, 7,991,	14,962 23,054	3,019, 7,628,
<i>Totals Cleared....</i>	39,887	11,909,	298	40,813	11,736,	39,282	11,116,	38,016	10,647,

GOLD AND SILVER BULLION AND SPECIE. — IMPORTED AND EXPORTED. — (United Kingdom.) — Computed Real Value for the First Nine Months (January—September), 1869-68-67.

[000's omitted.]

(First Nine Months.)	1869.		1868.		1867.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
Imported from:—	£	£	£	£	£	£
Australia	5,943,	2,	5,327,	—	3,864,	—
So. Amca. and W. } Indies	2,122,	2,077,	1,198,	2,395,	2,134,	3,804,
United States and } Cal.	1,471,	795,	6,812,	1,801,	4,520,	1,232,
	9,536,	2,874,	13,247,	4,196,	10,518,	5,036,
France	683,	1,530,	268,	814,	380,	682,
Hanse Towns, Holl. } & Belg.	27,	956,	47,	170,	80,	193,
Prtgl., Spain, and } Gbrltr.	49,	91,	442,	85,	75,	88,
Mlt., Trky., and } Egypt	154,	11,	40,	91,	120,	60,
China	1,	—	—	—	—	—
West Coast of Africa	87,	—	72,	6,	110,	2,
All other Countries....	117,	30,	481,	565,	420,	61,
<i>Totals Imported....</i>	10,654,	5,492,	14,597,	5,927,	11,703,	6,122,
Exported to:—						
France	3,284,	2,924,	6,059,	1,317,	3,515,	1,301,
Hanse Towns, Holl. } & Belg.	35,	343,	134,	3,287,	261,	2,582,
Prtgl., Spain, and } Gbrltr.	60,	—	588,	1,	353,	1,
	3,379,	3,267,	6,781,	4,605,	4,129,	3,884,
Ind. and China (viâ } Egypt)	1,063,	2,814,	844,	723,	75,	540,
Danish West Indies	—	—	—	—	—	—
United States	874,	—	113,	—	49,	—
South Africa	20,	—	63,	—	22,	—
Mauritius	—	—	—	—	—	—
Brazil	435,	—	931,	49,	31,	71,
All other Countries....	733,	493,	640,	180,	379,	89,
<i>Totals Exported....</i>	6,504,	6,574,	9,372,	5,557,	4,685,	4,584,
Excess of Imports	4,150,	—	5,225,	370,	7,018,	1,538,
„ Exports	—	1,082,	—	—	—	—

REVENUE.—(UNITED KINGDOM.)—30TH SEPTEMBER, 1869-68-67-66.

Net Produce in YEARS and QUARTERS ended 30th SEPT., 1869-68-67-66.

[000's omitted.]

QUARTERS, ended 30th Sept.	1869.	1868.	1869.		Corresponding Quarters.	
			Less.	More.	1867.	1866.
	£	£	£	£	£	£
Customs	5,333,	5,488,	155,	—	5,502,	5,541,
Excise	4,326,	4,184,	—	142,	4,300,	4,520,
Stamps	2,179,	2,084,	—	95,	2,200,	2,075,
Taxes	318,	300,	—	18,	272,	243,
Post Office	1,200,	1,190,	—	10,	1,200,	1,160,
Property Tax	13,356,	13,246,	155,	265,	13,474,	13,539,
	1,128,	1,060,	—	68,	648,	633,
Crown Lands	14,484,	14,306,	155,	333,	14,122,	14,172,
	74,	73,	—	1,	72,	71,
Miscellaneous	668,	740,	71,	—	720,	953,
<i>Totals</i>	15,226,	15,119,	226,	334,	14,914,	15,196,
			NET INCR. £107,735			

YEARS, ended 30th Sept.	1869.	1868.	1869.		Corresponding Years.	
			Less.	More.	1867.	1866.
	£	£	£	£	£	£
Customs	22,331,	22,590,	259,	—	22,492,	21,621,
Excise	20,718,	19,875,	—	843,	20,334,	20,255,
Stamps	9,427,	9,250,	—	177,	9,609,	9,356,
Taxes	3,466,	3,507,	41,	—	3,525,	3,422,
Post Office	4,670,	4,590,	—	80,	4,590,	4,365,
Property Tax	60,612,	59,812,	300,	1,100,	60,550,	59,019,
	8,906,	7,281,	—	1,625,	5,695,	5,595,
Crown Lands	69,518,	67,093,	—	2,725,	66,245,	64,614,
	362,	347,	—	515,	332,	322,
Miscellaneous	3,382,	2,867,	—	15,	2,893,	3,524,
<i>Totals</i>	73,262,	70,307,	300,	3,255,	69,470,	68,460,
			NET INCR. £2,955,205			

REVENUE.—UNITED KINGDOM.—QUARTER ENDED 30TH SEPT., 1869:—

An Account showing the REVENUE and other RECEIPTS of the QUARTER ended 30th of September, 1869; the ISSUES out of the same, and the Charges on the Consolidated Fund at that Date, and the Surplus or Deficiency of the Balance in the Exchequer on the 30th of September, 1869, in respect of such Charges.

Received:—

	£
Income received, as shown in Account I	15,226,740
Amount raised on account of Fortifications, per Act 30 and 31 Vict., } cap. 145	100,000
Amount received in repayment of Advances for Public Works, &c. ...	302,467
„ for New Courts of Justice	2,000
	<u>£15,631,207</u>
Excess of the Sums charged on the Consolidated Fund on the 30th of September, 1869, payable in December Quarter, 1869, above the Balance in the Exchequer at that date, viz.:—	
Excess of Charge in Great Britain	£3,878,308
Surplus over Charge in Ireland	188,433
Net deficiency	<u>*3,689,875</u>
Charge on 30th of September, 1869	6,521,204
Paid out of Growing Produce in September Quarter, 1869 ...	697,281
Portion of the Charge payable in December Quarter, 1869 ...	5,823,923
To meet which there was in the Exchequer on the 30th } of September, 1869	2,134,048
Net Deficiency as above	<u>3,689,875</u>
	<u><u>£19,321,082</u></u>

Paid:—

	£
Net Deficiency of the Balance in the Exchequer to meet the Charge } on the 30th of June, 1869, as per last Account	2,580,038
Amount applied out of the Income to <i>Supply Services</i> (including } 1,000,000 <i>l.</i> Exchequer Bonds paid off)	10,216,840
Amount advanced for New Courts of Justice	3,000
Charge of the <i>Consolidated Fund</i> on the 30th of September, 1869, viz.:—	
Interest of the Permanent Debt	£5,022,464
Terminable Annuities	528,008
Interest of Exchequer Bonds	41,000
„ „ Bills	29,429
„ „ Deficiency Advances	3,458
The Civil List	101,386
Other Charges on Consolidated Fund	445,231
Advances for Public Works, &c.	350,228
Paid out of Growing Produce in September } Quarter, 1869	£697,281
Payable in December Quarter, 1869	5,823,923
	<u>6,521,204</u>
	<u><u>£19,321,082</u></u>

BRITISH CORN.—*Gazette Average Prices (ENGLAND AND WALES),
Third Quarter of 1869.*

[This Table is communicated by the Statistical and Corn Department, Board of Trade.]

Weeks ended on a Saturday, 1869.		Weekly Average. (Per Impl. Quarter.)					
		Wheat.		Barley.		Oats.	
		s.	d.	s.	d.	s.	d.
July	3	47	9	35	8	26	2
"	10	48	11	30	6	27	—
"	17	50	2	32	—	26	—
"	24	50	11	30	3	27	3
"	31	51	9	31	4	27	9
Average for July		49	10	31	11	26	10
Aug.	7	51	6	32	4	26	4
"	14	52	—	30	10	27	11
"	21	53	1	33	7	26	3
"	28	54	2	32	7	28	2
Average for August		52	8	32	4	27	2
Sept.	4	51	11	36	8	26	8
"	11	49	10	37	10	25	11
"	18	50	5	38	3	25	5
"	25	50	6	37	3	25	6
Average for September		50	8	37	6	25	10
Average for the quarter		50	11	33	9	26	7

RAILWAYS.—PRICES, *July—September;—and* TRAFFIC, *January—September, 1869.*
[Abstract from "Herapath's Journal" and the "Times."]

Total Capital Ex- tended Mlins.	Railway.	For the (£100). Price on			Miles Open.		Total Traffic. First 39 Weeks. (000's omitted.)		Traffic pr. Mile pr. Wk. 39 Weeks.		Dividends per Cent. for Half Years.		
		1st Sept.	2nd Aug.	1st July.	'69.	'68.	'69.	'63.	'69.	'68.	June, '69.	Dec. '68.	June, '68.
£					No.	No.	£	£	£	£	s. d.	s. d.	s. d.
57,9	Lond. & N. Westn.	117½	119¼	119¼	1,446	1,416	4,793,	4,967,	85	89	55 -	67 6	52 6
49,8	Great Western	54¾	52	51	1,386	1,386	3,036,	3,002,	56	55	20 -	15 -	12 6
21,3	„ Northern...	105	107	108	487	487	1,544,	1,556,	81	82	42 6	75 -	42 6
29,5	„ Eastern	38¼	39¼	39	746	728	1,447,	1,399,	50	49	5 -	Nil	Nil
17,6	Brighton	45½	45¼	45	367	349	952,	914,	65	67	Nil	12 6	„
20,2	South-Eastern	76¾	77	77¾	346	346	1,102,	1,078,	82	79	25 -	40 -	22 6
17,3	„ Western....	91	92	91	521	503	1,071,	1,029,	53	53	40 -	52 6	40 -
13,6		75½	76	76	5,299	5,215	13,945,	13,945,	67	68	26 9	37 6	24 3
34,8	Midland	117¾	118¼	118	789	768	2,262,	2,162,	73	72	57 6	57 6	50 -
23,3	Lancsh. and York.	125½	128	126½	420	411	1,930,	1,873,	117	116	67 6	67 6	67 6
16,0	Sheffield and Man.	55	55½	55¼	251	251	815,	822,	83	84	20 -	25 -	Nil
40,4	North-Eastern ...	114½	113	106½	1,275	1,246	2,884,	2,797,	58	58	57 6	60 -	45 -
14,5		103	103¾	101½	2,735	2,676	7,891,	7,654,	74	73	50 7	52 6	40 7
22,2	Caledonian	82	81	79½	674	674	2,176,	2,137,	82	81	35 -	37 6	15 -
6,2	Gt. S. & Wn. Irln.	96	98	97	420	420	—	—	—	—	50 -	45 -	50 -
356,5	Gen. aver.	86	86½	85½	9,128	8,985	24,012,	23,736,	—	—	36 7	42 7	30 7

Consols.—Money Prices, 1st Sept., 93½ to ¼.—2nd Aug., 93½ to ¼.—1st July, 92¾ to ½.
Exchequer Bills.—1st Sept., 3s. to 7s. pm.—2nd Aug., 3s. to 6s. pm.—1st July, 3s. dis. to 2s. pm.

BANK OF ENGLAND.—WEEKLY RETURN.

Pursuant to the Act 7th and 8th Victoria, c. 32 (1844), for Wednesday in each Week, during the THIRD QUARTER (July—Sept.) of 1869.

[0,000's omitted.]

1	2	3	4	5	6	7
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.	DATES.	Assets.			Notes in Hands of Public.	Minimum Rates of Discount at Bank of England.
Notes Issued.	(Wednesdays.)	Government Debt.	Other Securities.	Gold Coin and Bullion.	(Col. 1 minus col. 16.)	
£	1869.	£	£	£	£	1869. Per ann.
Mlns.	July 7	Mlns.	Mlns.	Mlns.	Mlns.	24 June 3½ p. ct.
33,74	July 7	11,01	3,98	18,74	23,99	15 July 3 ..
33,75	„ 14	11,01	3,98	18,75	23,91	
34,17	„ 21	11,01	3,98	19,18	23,85	
34,28	„ 28	11,01	3,98	19,29	23,54	
34,54	Aug. 4	11,01	3,98	19,54	24,27	
34,61	„ 11	11,01	3,98	19,61	23,79	
34,91	„ 18	11,01	3,98	19,91	23,69	19 Aug. 2½ ..
35,00	„ 25	11,01	3,98	20,00	23,27	
34,93	Sept. 1	11,01	3,98	19,93	23,58	
34,54	„ 8	11,01	3,98	19,54	23,38	
34,40	„ 15	11,01	3,98	19,40	23,27	
34,22	„ 22	11,01	3,98	19,22	23,07	
33,83	„ 29	11,01	3,98	18,83	23,69	

BANKING DEPARTMENT.

8	9	10	11	12	13	14	15	16	17	18	
Liabilities.					DATES. (Wdnsdys.)	Assets.					Totals of Liabili- ties and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.			
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.		
£	£	£	£	£	1869.	£	£	£	£	£	
Mlns.	Mlns.	Mlns.	Mlns.	Mlns.	July 7	Mlns.	Mlns.	Mlns.	Mlns.	Mlns.	
14,55	3,35	4,46	21,09	,47	July 7	15,70	17,41	9,75	1,06	43,93	
14,55	3,35	3,92	19,94	,51	„ 14	15,72	15,69	9,84	1,02	42,27	
14,55	3,37	4,17	19,93	,48	„ 21	15,72	15,41	10,32	1,05	42,51	
14,55	3,39	4,27	19,61	,47	„ 28	15,32	15,19	10,74	1,03	42,29	
14,55	3,41	3,74	18,10	,52	Aug. 4	14,80	14,29	10,27	97	40,33	
14,55	3,41	3,24	18,59	,52	„ 11	14,40	14,01	10,82	1,08	40,32	
14,55	3,43	3,27	18,60	,51	„ 18	14,30	13,79	11,22	1,05	40,36	
14,55	3,40	3,77	18,70	,48	„ 25	14,34	13,80	11,73	1,03	40,90	
14,55	3,68	3,91	18,41	,52	Sept. 1	14,34	14,35	11,35	1,03	41,07	
14,55	3,68	4,57	17,55	,53	„ 8	14,34	14,33	11,16	1,06	40,89	
14,55	3,69	4,95	17,57	,52	„ 15	14,34	14,80	11,13	1,00	41,28	
14,55	3,70	5,12	17,36	,52	„ 22	14,32	14,82	11,15	94	41,26	
14,55	3,71	5,59	17,22	,59	„ 29	13,82	16,70	10,14	1,01	41,67	

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

the London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND and WALES on Saturday in each Week during the THIRD QUARTER (July—September) of 1869; and in SCOTLAND and IRELAND, at the Three Dates, as under.

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES.	London: Cleared in each Week ended Wednesday.*	Private Banks. (Fixed Issues, 4,04).	Joint Stock Banks. (Fixed Issues, 2,74).	TOTAL. (Fixed Issues, 6,78).	Weeks ended	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 2,75).	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 6,35).
1869.	£	£	£	£	1869.	£	£	£	£	£	£
July 3	75,71	2,61	2,23	4,84	July 17	1,79	2,88	4,67	3,33	2,82	6,14
10	80,91	2,65	2,28	4,94							
17	62,37	2,65	2,26	2,91							
24	81,20	2,61	2,23	4,84							
31	57,23	2,60	2,21	2,81	Aug. 14	1,69	2,84	4,53	3,31	2,72	6,03
Aug. 7	81,00	2,59	2,21	4,80							
14	57,94	2,57	2,22	4,79							
21	78,62	2,53	2,22	4,75							
28	56,40	2,51	2,21	4,72	Sept. 11	1,74	3,86	4,60	3,22	2,79	6,02
Sept. 4	69,70	2,54	2,22	4,76							
11	61,11	2,56	2,25	4,81							
18	73,40	2,60	2,28	4,88							
25	59,56	2,65	2,31	4,96							

* The Wednesdays preceding the Saturdays.

FOREIGN EXCHANGES.—Quotations as under, LONDON on Paris, Hamburg and Calcutta;—and New York, Calcutta, Hong Kong and Sydney, on LONDON—with collateral cols.

1	2	3	4	5	6	7	8	9	10	11	12
DATES.	Paris.				London on Hamburg.	New York.	Calcutta.		Hong Kong.	Syd- ney.	Standard Silver in bars in London. pr. oz.
	London on Paris. 3 m. d.	Bullion as Arbitrated.		Prem. or Dis. on Gold per Mille.			India Council.	At Calcutta on London.			
		Agnst. Engd.	For Engd.								
1869.		pr. ct.	pr. ct.			pr. ct.	d.	d.	d.	pr. ct.	d.
July 3.	25·40	—	—	par.	13·12	109 $\frac{5}{8}$	23 $\frac{1}{4}$	23 $\frac{9}{16}$	55 $\frac{3}{4}$	1 $\frac{1}{4}$ pm.	60 $\frac{1}{4}$
„ 17.	„	—	—	„	11 $\frac{3}{4}$	110 $\frac{1}{8}$	„	„	54 $\frac{3}{4}$	1	„ $\frac{5}{16}$
Aug. 7.	37 $\frac{1}{2}$	—	—	„	„	110	„	„	54	„	„ $\frac{1}{4}$
„ 21.	„	—	—	„	„	109 $\frac{5}{8}$	„ $\frac{3}{8}$	„ $\frac{5}{8}$	„ $\frac{1}{4}$	„	„ $\frac{3}{4}$
Sept. 4.	„	1	—	„	„	„ $\frac{1}{4}$	„ $\frac{1}{2}$	„ $\frac{7}{8}$	„ $\frac{1}{2}$	„	„ $\frac{3}{8}$
„ 18.	„	—	—	„	12	108 $\frac{1}{8}$	„ $\frac{3}{8}$	„ $\frac{3}{4}$	55 $\frac{1}{2}$	„	„ $\frac{1}{2}$

INDEX TO VOL. XXXII,

YEAR 1869.

	PAGE
AGRICULTURAL LABOURER, unsatisfactory condition of . . .	75
<i>The Agricultural Labourer</i> [from the "Daily News"] . . .	117
Canon Girdlestone's depreciatory view of the condition of the agricultural labourer, overdrawn, and applicable only to the most backward counties of England—education, emigration, and other remedies proposed . . .	117-18
AGRICULTURAL STATISTICS of the United Kingdom, Second Paper (see <i>Caird</i>)	61
of Great Britain.	
— <i>table</i> of number of occupiers of land and owners of live stock in 1868	135
— acreage of crops and grass, number of live stock, &c., 1868 .	136-41
AGRICULTURE, the proportion of the people dependent on in England, reduced from 28 per cent. in 1831, to 10 per cent. in 1861 . . .	76
AGRICULTURE. <i>Statistical Notes on some Experiments in Agriculture</i> [from the "Memoranda" of J. B. Lawes]	438
Permanent meadow land 250 per cent. in favour of the manured against the unmanured plots	438-9
Experiments on the growth of barley and wheat (132 and 168 per cent. excess from the manuring)	439-40
Valuable result of alternating wheat with beans	441
<i>Table</i> of average results of rotation of crops in manured and unmanured plots .	441
AGRICULTURE. <i>The Changes in Agriculture in Cornwall since 1800</i> [from a paper by John Thomas, of Pradannack]	441
Great increase in the cultivation of the potato and turnip since the commencement of the century—discovery of new manures, and their special application to root crops	441-2
Invention of the drill, horse-hoe, and other agricultural implements, steam thrashing machines, &c.	443
Changes in the breeding of cattle, sheep, and pigs	444
Improvements in farm buildings; cultivation of waste land: thorough draining; economisation of labour	445
AGRICULTURE. <i>Agriculture in France</i> [from the "Pall Mall Gazette"] .	224
Report of the Commission of the French Government on the condition of French agriculture (M. de Mornay's Preface)	225
Incredible pitch which subdivision has reached (half an acre in each plot, and 2½ acres to each landowner)	225
The smaller owner more successful than the larger owner (if the amount of labour is not considered)	225
A division of goods to one and land to another child in equal values, voidable at law	226
Evils of subdivision, and some proposed remedies, &c.	226
ALABAMA CONVENTION, failure of	80
AMERICA, UNITED STATES OF. State of its currency, and reasons against an early return to specie	94

	PAGE
AMERICA, UNITED STATES— <i>contd.</i>	
— see <i>Banks of, Railways of, Towns</i> (management of).	
— effects of the suspension of specie payments and protective tariff	371
ARMIES, arguments for the substitution of popular, for standing armies	457
(European) benefits of a semi-disarmament of	368-9
meeting at the Congress at the Hague, 1869, in favour of ditto . .	409
address at the Congress by E. Chadwick in favour of ditto, see <i>Military Expenditure.</i>	
ARMS OF PRECISION (the new), effectual according to the intelligence of the user, more available for defence than offence, and uselessness of all existing armour against them	457-8
ASSAM, cultivation of the tea plant in (see <i>Fielder</i>)	29
area and population, wages, food, revenue, &c.	32-3
ASSURANCE (LIFE). <i>Statistics of Life Assurance Offices</i> [from the "Pall Mall Gazette"]	222
Number of those registered since 1844, which have been amalgamated with other companies, or have been wound up, &c.	223
BANK OF ENGLAND,	
weekly return of the issue and banking departments :	
Fourth quarter, 1868 . 150 Second quarter, 1869 . 357	
First " 1869 . 256 Third " . 482	
BANKS, London clearing and amounts of promissory notes in circulation (in England and Wales, Scotland and Ireland) :	
Fourth quarter, 1868 . 151 Second quarter, 1869 . 358	
First " 1869 . 257 Third " . 483	
BANKS. <i>The Reserves of the National Banks of the United States</i> [from the "Economist"]	121
Table of resources and liabilities of the banks of the principal cities of the union; the reserve said to be 25 per cent. of liabilities, but this official statement too high, the real proportion being 11½ per cent. This latter shown to be much higher than the English standard, if the bank deposits in the Bank of England are not reckoned	121-4
BANKERS. See <i>Clearing House.</i>	
BANKRUPTCY, report on in the Congress at the Hague, 1869	403
BAUMHAUER'S (Dr. Von) programme of the Dutch International Statistical Congress	192
BAXTER (Dudley) on taxation, notice of	363
BET ROOT. See <i>Sugar.</i>	
BERG'S (Dr.) theory of the repressive influence of famine, war, &c., on the third succeeding generation	374-5
BIRTHS. See <i>Registration.</i>	
ILLEGITIMATE, rate per cent. in Scotland :	
Quarter Dec., 1868 . 133 Quarter June, 1869 . 347	
" March, 1869 . 242 " Sept., " . 472	
BLOCK (M.). "L'Europe Politique et Sociale," notice of	381
BRITISH ASSOCIATION for the Advancement of Science. Thirty-ninth Meeting. Section F. Opening address of the president (see <i>North-cote</i>)	259
BROWN (Samuel). <i>On the Statistics of the Kingdom of the Netherlands</i>	192
Dr. von Baumhauer's programme for the Dutch International Statistical Congress	192
Population and territory of the Netherlands; ratio of increase between the censuses	193
— numbers in religious sects, large town population, &c.	194
— unsatisfactory population statistics of the Dutch Oriental possessions; failure of M. Baud's form of agricultural census from non-remuneration of the natives	194-5

	PAGE
BROWN (Samuel). <i>On the Statistics of the Netherlands—contd.</i>	
Population of the colonial possessions of the Netherlands	195-6
— proportion of females, illegitimate births, ratio of deaths, proportions of marriages, &c.	196-9
Army and navy: numbers and personnel in 1868; duration of service, &c.	199-200
Commerce: imports and exports, increase 1865-67, amounts according to countries, principle articles of commerce, and their increase or decrease	200-202
— the cattle plague, its effects; measures to stamp out the disease, &c.	202
— mercantile marine, vessels and tonnage, decrease since 1865	203
Railways: State system adopted in 1860, and progress since, traffic and receipts	203-4
Post office: increase of letters, 1865-67, total receipts, &c.	205
Telegraphs: length of lines, number of messages, and their cost	205-6
Education: excellence of the public schools, their number, and number of teachers and scholars	206
Finance: budget for 1869, items of excise, diminution of expenditure since 1866	207-8
National debt: amount in 1869, its gradual reduction, since 1850, by a sinking fund	208-9
— budget and management of the East Indian possessions, Java, abolishment of slavery in 1860, West India deficit, &c.	209-12
Mr. Thurlow's report on Inspector Beijerwick's scheme of the Netherland Crédit Foncier for draining and cultivating the Zuyder Zee	213 (note)
Noble traits, industry, and patriotism of the Hollanders	213

BROWN (Samuel). <i>Report on the Seventh International Statistical Congress, held at the Hague, 6th—11th September, 1869</i>	391
Marked improvement in Government statistics of different countries since the adoption of the resolutions of previous Congresses	391
Programme of subjects to be discussed at the Hague, based on a paper drawn up by M. von Baumhauer	392-3
Plan of an "avant-congrès" to organise the proceedings.—propositions discussed there	393-5
Address of M. Folk, Minister of the Interior (summary of statistical progress in Holland)	395
Election of officers and presidents, and notice of deceased members of the Congress	396-7
Section I. Theory of statistics and their application, methodology, and graphic method	397-400
— number of still-born children; construction of tables of mortality	400-402
Proposition for carrying out, by division of labour, a complete system of international statistics	402
Section II. Civil and commercial justice: gratuitous judicial aid, mortmain, bankruptcy, share companies, and organisation	402-4
Section III. Financial statistics: Cadastre, credit foncier, revenue, finances of communes, banks	404-6
Section IV. Maritime fisheries and foreign commerce	406-7
Section V. European transoceanic possessions: necessity for non-interference with native religious prejudices, legal processes, &c.	407-8
General assembly: mortmain, general adoption of the metric system of weights and measures; publication of international statistics	408-9
Meeting relative to the question of military economy	409
Notice of the honours and hospitality received by the Congress	410

BUDGET. See *Paris* (Budget of).

BULLION AND SPECIE, gold and silver, imported and exported:

Jan.—Dec., 1866-68	146	Jan.—June, 1867-69	353
Jan.—March, 1867-69	252	Jan.—Sept., „	478

CAIRD (James). <i>On the Agricultural Statistics of the United Kingdom.</i> (Second paper)	61
---	----

Estimate and result of wheat crop of 1867: foreign supply 9,609,006 qrs., and saving of 5 per cent. in consumption, from rise of 50 per cent. in price	61-2
Wheat crop, 1868: increased yield over 1867, of seven million quarters	63
Price and supply: fall of one-third, corresponding to increased produce of 1868	63
— foreign imports not much affected by fall in price if the harvest abroad is abundant	63-4
Steady decline in the price of wheat under free trade	64
Estimated consumption of wheat per head per annum, and our dependence on foreign supply to meet the increased consumption	65
Wide extent of the region suited to wheat cultivation (with map), equal to supply of any increased rate of our consumption	65-7

	PAGE
CAIRD (James). <i>Agricultural Statistics of United Kingdom—contd.</i>	
Percentage proportion of corn and green crops, and live stock in each division of the United Kingdom	67-8
Large increase of sheep in United Kingdom during 1868, and decrease of foreign supply	68
Number of sheep in United Kingdom and the colonies (not India) 100 million	68
No increase in foreign dairy produce since 1862	69
More rent and wages paid by the moderate-sized, than by the large, farms	69
The culture of wheat affected more by circumstances of soil and position, than by variation of price	69
Large farm system where there is chalk formation and no coal, and small farm system where the contrary	70
Fallow land: greatest extent left in France and Prussia, least in Ireland	70
The agricultural systems of England and Scotland alike, but Ireland with much less proportion of exhaustive crops	70
Illustration of the effect of an excess of exhaustive crops in France and Prussia, their inferior produce per acre	71
Feeble yield of France, owing chiefly to bad cultivation and dry spring climate in the southern departments, and to a third of the cereal surface being fallow at a time	71-2
In Ireland, Leinster with the highest value of land, has the smallest population, and Connaught <i>vice versa</i>	72
Great reduction in number of small holdings in Ireland in 1845-50, but not since	72-3
The small farmer class hold only one-eighth of the cultivated land in Ireland	73
The remaining seven-eighths (chiefly green crops), as productive per acre as England and Scotland	73
Real distress in Ireland confined to the small farmers	73
Farms below 15 to 20 acres, allowed by competent judges to be too small to afford a proper return for the entire labour of a man and his family	74
Unsatisfactory condition of the English agricultural labourer, but less known from not being so forced upon public attention	75
Great change in the proportion of the people dependent on agriculture, from 28 per cent. in 1831, to 10 per cent. in 1861	76
Benefits and success that would attend the manufacture of beet-root sugar in England and Ireland	76-7
Desirability of adding returns of horses to those of live stock	77
CENSUS OF 1861, objections to the tables on occupations, and review of the classifications by employments in	275-82
of 1871, suggestions for alterations in the forthcoming census	285-7
— reasons for a census of religious sects in	375-6
— proposals for additional information as to house accommodation in (see <i>Palgrave</i>)	411
CENSUS. <i>New Zealand Census, December, 1867</i> [from the "Australian Mail"]	450
Population of each of the provinces, annual increase since 1869, 9 per cent.	450
Population of each province in 1858-61-64-67, and population of cities and towns	451
Number of the aboriginal population; proportion of sexes, married and unmarried; houses; electors; places of birth	452-3
CHADWICK (Edwin), address at the Congress at the Hague, 1869, see <i>Military Expenditure</i> .	
CHARITABLE TRUSTS, on returns for comparison of efficiency of	369
CHINA. See <i>Opium</i> in China.	
CIRCULATION. See <i>Currency, Banks</i> .	
CIVIL SERVICE, on its cost and organization (see <i>Mann</i>)	38
statements of its organization	48-60
proposals for the introduction of an inferior class for mechanical office work, and restricting these clerkships to that class, low rate of pay, &c.	52-6
estimates for, their large apparent increase accounted for, and the real amount stated	38-41
estimates for, statement of the objects of their increase	41-7
remuneration, proposed substitution of a few scales of, for the numerous existing ones	57

	PAGE
CLEARING HOUSE. <i>The Statistics of the London Bankers' Clearing House, for Two Complete Years, 1867-69</i> [from the "Money Market Review"]	228
Total cleared during year ending May, 1869, 3,534 millions	228
Average daily and fortnightly amounts (increase in 1868), daily clearances on monthly consol account days, inland bill days, and ordinary days	229-30
COAL, <i>table of quantity and value produced in United Kingdom, 1858-67</i>	244
COLONIES (BRITISH), theoretical ideas as to their independence pushed too hurriedly to extremes, and the possibility of their adopting restrictive tariffs, and thus destroying our export trade to them, when cut adrift	297
disadvantage, in case of war, of their becoming neutral ports, and of our losing their sympathy	298
COMMERCE. <i>General Results of the Commercial and Financial History of 1868</i> [from the "Economist"]	78
Political events: France and Prussia, Turkey and Greece, Brazil and Paraguay, and Abyssinia	78-9
Failure of the Alabama convention	80
Excessive drought of the summer of 1868, but finest wheat crop since 1825	80
Average of foreign harvests	81
Average price of wheat after harvest, and annual average, 1863-68	81
Quantity and value of home produce and foreign imports of wheat, 1862-68	82
A rise or fall of 20s. in annual price, equal to a deficit or surplus of 21 millions sterling, available for articles other than bread	82
Comparative wholesale prices in London, 1857-64-67-68	83
Increased exports of gold and silver to the East from Abyssinian War.	84
Export of gold and silver to Egypt and the East, 1861-68	85
Cotton, average price, annual and weekly consumption and value, 1856-68	86-7
Adoption of short time, but objections of the manufacturers to a reduction of wages	87
Cotton trade, details of, 1856-68; prospects of supply for 1869, probable deficiency for years to come from loss of negro labour in America, and additions entirely from India, &c.	88-91
Iron, steel, and other hardware articles, improvement of the trade during 1868, especially of the pig iron trade from Cleveland to Scotland	91-2
— production of iron ore and pig iron in 1868, and new modifications in the process of the manufacture	92
Utilisation of sewage, new method of transport of stone, and Australian Company for preservation of meat	93
United States, state of its currency, reasons against an early return to specie payments, &c.	94
Railway Companies, improvement in their condition during 1868	95
Further results of the finance calamities of 1866, mode of business adopted by financing contractors	96-8
Bad trade and harvests and losses of 1866-68, and excessive retrenchment of the higher and middle classes	98
Average annual production of gold and silver, 1849-68, low average earnings of the miners; necessity for a continued increase in gold supplies, &c.	99-101
COMMONS, HOUSE OF. <i>Statement of members of noble families in that of 1868</i>	109-10
CONGRESS (SEVENTH INTERNATIONAL STATISTICAL) at the Hague, September, 1869. Programme of	192
notice of, and suggestions relative to	377-8
report on (see <i>Brown</i>)	391
COPPER— <i>table of quantity and value produced in United Kingdom, 1858-67</i>	245
CORN— average weekly prices (with monthly and quarterly averages): Fourth quarter, 1868 . 149 Second quarter, 1869 . 356 First ,, 1869 . 255 Third ,, . 481	
CORNWALL. See <i>Agriculture</i> in.	
COTTON— average price and annual consumption and value, 1856-68	86-7
<i>table of prices of, 1855-68</i>	436

	PAGE
COTTON— <i>contd.</i>	
<i>tables of exports of, and of cotton goods to India, China, and the United States, 1855-68</i>	435
COTTON TRADE, details of 1856-68, and prospects for 1869	88-91
of the United Kingdom during 1862-68 as compared with 1855-61 (see <i>Helm</i>)	428
CREDIT FONCIER (Netherlands), scheme of, for draining and cultivating the Zuyder Zee	213
CRIME, see <i>Insanity and Crime.</i>	
CRIMINAL CASES, plea of insanity in (see <i>Guy</i>)	176-82
DEATH. See <i>Mortality, Registration.</i>	
DEVONSHIRE, birth, marriage, and death-rates, less in, than in Lancashire	264
education by the writing-name test better, and criminality less than in Lancashire	264
ELECTIONS. <i>General Election, 1868</i> [from "Standard" and "Daily News"]	102
Statement from the "Standard" on the relative increase or decrease in number of Conservatives and Liberals, 1865-68, proportion to the population, &c.	103-5
Ditto from the "Daily News"	106-7
Historical summary of the strength of parties at each election since 1832	107-9
Statement of the members of noble families in the new House of Commons of 1868	109-10
ELECTIONS. <i>Cost of Lancashire Voters per Head</i> [from the "Times"]	111-13
EMIGRATION. <i>Emigration, 1868, and Previous Years</i> [from the "Canadian News"]	333
Decrease in real emigration since 1863, balanced by increase of emigration of foreigners through England	334
Decrease of Irish emigrants since 1863	334
Comparison of numbers of emigrants to the United States, Canada, and Australia; amounts of remittances from emigrants, &c.	335
"ESQUIROS DE PARIEU on Taxation," notice of	363
EXAMINATION (CIVIL SERVICE COMPETITIVE) of selected candidates, effects in the candidates being too well educated for the situations	54
EXAMINATIONS. <i>Annual Science Examinations</i> [of the Science and Art Department]	222
Number of candidates in each subject, 1868-69	222
EXCHANGES (FOREIGN), quotations on London, &c.:	
Oct.-Dec., 1868	151
Jan.-March, 1869	257
April-June, 1869	358
July-Sept., "	483
EXPORTS, United Kingdom:	
Jan.-Dec., 1864-68	144
Jan.-March, 1865-69	250
Jan.-June, 1865-69	351
Jan.-Sept., "	476
total of foreign and colonial produce, 1862-66	248
see <i>Imports, Trade.</i>	
to our North American colonies double those to the United States per head of population	297
FACTORIES, remarks on the return of those existing in 1868 (see <i>Helm</i>)	428
<i>tables of, the three textile manufactures, 1856-61-68</i>	434
FALLOW LAND, greatest extent left in France and Prussia, and least in Ireland	70
feeble yield of France, from a third of the cereal surface being fallow at a time	71-2

	PAGE
FARM BUILDINGS, improvements in, in Cornwall	445
FARMS, more rent and wages paid by moderate-sized than by large	69
below 15 to 20 acres too small to support a man and his family	74
FIELDER (Charles Henry). <i>On the Rise, Progress, and Future Prospects of Tea Cultivation in British India</i>	29
Discovery of the plant in Assam in 1823 : its natural and cultivated state; appropriate climate and soil, &c.	29
Grant of waste lands in Bengal and prices and rents per acre.	30
The cultivation nearly ruined by a class of speculators who acquired the land merely for re-sale when planted	30-31
Necessity of a regular supply of labour	31
Area and population of Assam : importation of Coolies ; wages, prices of food, revenue, &c.	32-3
Experience of practical planters, as to expenses, annual outlay, and amount of produce of the tea	33-5
— imports, price per pound, amounts sold, &c.	36
Number of companies and private planters and their capital.	37
Dependence of the India tea cultivation on Government encouragement	37
FINANCE CALAMITIES of 1866, further results of, financing contractors' mode of business, &c.	96-8
FINANCIAL HISTORY of 1868, see <i>Commerce</i> .	
FINANCIAL STATISTICS. Report on at the Congress at the Hague, 1869	404-6
FISHERIES (MARITIME). Report on at the Congress at the Hague, 1869	406-7
FLAX AND HEMP, extent to which they replaced cotton during the American Civil War	430-31
<i>table</i> of imports of, 1855-68	436
FOOD, average consumption of articles of, among different classes	366
FRANCE. See <i>Agriculture</i> in.	
subdivision of land in, see <i>Agriculture</i> .	
see <i>Post Office</i> .	
GLOVER (John). <i>On the Decline of Shipbuilding on the Thames</i>	288
Silence and deserted appearance of the shipbuilding yards on the Thames	288
This decline not attributable to inferiority in skill, inadequacy of capital, nor the slightly higher cost of materials	288-9
The greatest difference in the price of coal, but this difference not sufficient to explain the destruction of such an industry	289
The fact explained by the cost of labour being 22·72 and 29·34 per cent. higher on the Thames than on the Clyde and Wear respectively	289-90
The trade on the Thames for a long time an unprofitable one, and only supported by Governments and large companies, while its workmanship was considered unrivalled	290
Establishment charges on the Thames double those on the northern rivers	290
The decline also due to the disuse of wood in shipbuilding, which has favoured the rivers where coal and iron are cheapest	290-91
The Thames masters unable to accommodate themselves to the changes, from the control of the "Unions"	291
<i>Table</i> of prices of materials, and wages on the Thames, Wear, and Clyde in 1869	292
GOLD. <i>Australasian Gold</i> [from the "Times"]	462
Average number of miners and their earnings in 1868, aggregate value of gold exported, &c.	462
GOLD, average annual production of, 1849-68 ; low earnings of the miners	99-101
large exports of from New Zealand since 1857	294
notice of the works of Tooke, Chevalier, Blake, &c., on the effects of the gold discoveries	372-3
GOLD AND SILVER, increased exports of to the East from Abyssinian War, and amounts, 1861-68	84-5
GOLD. <i>The Depreciation of Gold, 1847-69</i> [by Professor W. Stanley Jevons, from the "Economist"]	445
The prices of the year 1869 as the third year of commercial depression, not liable to be influenced by excessive credit	445-6

	PAGE
GOLD. <i>The Depreciation of Gold, 1847-69—contd.</i>	
Average ratio of prices of chief articles of commerce for the last twenty-two years, to those of 1849	446
Conclusion from them that there has been a net permanent rise of 18 per cent.	447
Comparison of prices at intervals of ten years, 1789-1869	447
Impossibility of analysing the exact causes of the fluctuations of price in each commodity	448
Supposition that the greatest depreciation of gold took place in 1857, and that there has been since a tendency to fall in prices	449
Acceptation of the rise of price by society, shown by the general increase of salaries in public and private establishments	449
GOLD. <i>Reduction in Weight of Gold Coin [from the "Times"]</i>	329
Mr. Lowe's proposal to charge a seigniorage of nearly 1 per cent. on the coining of bullion	329-30
Reasons for so doing: the making our sovereign the equivalent of 25 frs., the saving to the nation of the cost of coinage, &c.	330
Large amount of our heavy coinage melted down, while the light is returned into circulation	330
Mr. Lowe's argument that the change will not decrease the value of the sovereign, &c.	331
GUY (William A.). <i>On Insanity and Crime; and on the Plea of Insanity in Criminal Cases</i>	159
The two opposing opinions relative to the insanity or non-insanity of all crime	159
Summary of the qualifications and preconceived opinions of the author on the subject	159-60
Ratio of insane to sane criminals in the several classes of crime, from 6 in 10,000 in the less serious offences, to 14½ per 100 in murder	160-61
Ratio of insane to sane criminals, distinguishing those acquitted as insane from those declared insane	162
Necessity for qualifying these returns from the "Criminal Statistics" by those of the convict prison	162-3
Numbers of insane and sane prisoners as taken in the census, 31st March, 1862, and removals to asylums in 1859-61	164-6
Insanity among criminals, compared with insanity among other classes of society	166
Calculations showing that the criminal population is much more liable to insanity than the community at large	167-8
Comparative ratios of insanity among paupers and convicts	168
Crimes of insane convicts: tables showing proportion of weak-minded and diseased among civilians and military	168-9
— tables of proportional numbers of each class of crimes (male)	170-72
— ditto (female)	172-3
— diagrammatic arrangement of healthy, diseased, and weak-minded in classes of offences	174
— summary of results as to insane among criminals	175
Plea of insanity in criminal cases: apparent decrease in insane criminals shown in various periods of years between 1836-67	176
— this decrease occasioned by the operation of the Criminal Justice Act, 1856, in favour of summary jurisdiction	177-8
— argument from the fluctuations in the tables, that acquittals on the plea of insanity have not proved injurious to the safety of the public	178-80
— ditto, exemplified by four notorious cases	181-2
— summary of conclusions	182
Other possible causes of fluctuation in numbers of insane criminals: cholera, Indian mutiny, cotton famine, &c.	183-4
The increase of insanity among convicts shown to arise from other causes than a knowledge by them of the plea of insanity, set up for other offenders	185-6
Numbers of convicts certified as insane, 1851-64, and present number of weak minded convicts at Millbank (200)	186
General conclusions	187
Tables. Ratios of insane criminals, in periods of years, 1836-67	188
— ditto, crimes of violence and fraud distinguished	189
— ditto, crimes in detail and homicides only	190-91
GUY'S (Dr.) inquiries on statistics, notice of	373
HAMILTON (Archibald). <i>On the Economic Progress of New Zealand.</i>	293
Foundation of the colony in 1840: guarantee treaty with the natives relative to Government purchase of land, constitution of 1852, with Government control, the latter withdrawn in 1863	293
Great progress of the colony (exports 11,000 <i>l.</i> in 1841, and 4½ millions in 1867)	294
Large exports of gold since 1857, and increase in agricultural returns	294

	PAGE
HAMILTON (Archibald). <i>Economic Progress of New Zealand—contd.</i>	
Revenue, expenditure, population, and immigration	295
Decrease in the native population	295-6
Capabilities and resources indicative of the important destiny of the colony .	296
Changes in our relations with our colonies by free trade, and our giving them representative institutions.	296
Theoretical justness of the present opinions relative to colonial independence, but pushed too hurriedly to extremes	297
Probability that our colonies when cut adrift, may, like the United States, adopt restrictive tariffs, and thus destroy our export trade to them	297
Our exports to our North American colonies double those to the States per head of population	297
Disadvantage in case of war of all our colonial ports becoming neutral ports and of our losing their sympathy	298
Reality of the supposed sentimental indirect advantages we derive from our colonies independent of exports and emigration	298
Harshness of applying general abstract principles to the varying circum- stances of our colonies, especially exemplified in New Zealand	299
Hostility of the Maories traceable to disputes about land purchases by the Imperial Government	299-300
The responsibilities of self-government only accepted by the colonists on the understanding of Imperial assistance in suppression of the native rebellion	300
Injudicious and inopportune orders of the Colonial Office for the removal of the last British regiment and refusal to guarantee a loan	301
The effects of this narrow and selfish policy which are already apparent, and probable death struggle between the two races, and extermination of the Maories if continued	302-4
Benefits conferred by the new land courts on the friendly natives, and their probable use in arresting their decrease	304
Tables. Commercial and agricultural returns	305
— revenue, exports, and emigration to, and occupations in, New Zealand .	306-7
 HARVEST. <i>The Harvest Yield of 1868 [from "Mark Lane Express"]</i>	113
Premature maturity of the wheat from a mild spring, corrected by hot dry summer; fine wheat harvest, but deficiency of all other crops	113-14
 HELM (Elijah). <i>The Cotton Trade of the United Kingdom during the Seven Years, 1862-68, as compared with 1855-61, with Remarks on the Return of Factories existing in 1868</i>	428
Blockade of the Southern Ports in 1861; its effects on the cotton trade in the decrease of our American imports from 85 to 4 per cent. of the whole .	428
Order of the countries contributing cotton to us during the two periods . . .	429
Statements showing small comparative decrease (22 per cent.) in consump- tion to 158 per cent. increase in price, 1855-68	429
Slight contemporary rise in prices of flax and hemp, and extent to which they have replaced cotton; tables of annual exports of each	430
Chief influences affecting the demand for cotton, 1862-68; table of annual exports showing large increase of linen and woollen manufactures	431
Corroborative evidence of ditto from returns of persons employed, mills, spindles, and looms	431-3
Tables of factories of the three textile manufactures 1856-61-68	434
— exports of cotton and cotton goods to India, China, and the United States, 1855-68	435
— prices of cotton; imports of flax, hemp, &c. Textile fabrics exported, &c., 1855-68	436-7
 HEMP, see <i>Flax</i> and <i>Hemp</i> .	
HOLLAND, see <i>Netherlands</i> .	
HOUSE ACCOMMODATION of England and Wales, with reference to the census of 1871. (See <i>Palgrave</i>)	411
deficiencies of earlier and existing estimates	411-12
 IMPORTS, United Kingdom :	
Jan.-Dec., 1864-68 143	Jan.-May, 1865-69 350
Jan.-Feb., 1865-69 249	Jan.-Aug., „ 475
 INDIA (BRITISH). Tea cultivation in (see <i>Fielder</i>)	29
INSANE CONVICTS, crimes of, tables of, proportion of each class of crimes, &c.	168-175
tables of, and of their crimes	188-91

	PAGE
INSANITY and Crime (see <i>Guy</i>)	159
plea of, in criminal cases (see <i>Guy</i>)	176-82
among criminals compared with insanity among other classes	166
IRELAND, the cultivated land in, as productive as that in England and Scotland, except the one-eighth in the hands of the small farmers	73
IRON, <i>table</i> of quantity and value produced in the United Kingdom, 1858-67	245
and hardware, trade in 1868, increased production of pig iron, &c.	91-2
JARVIS (Dr.), of Dorchester, Massachusetts, see <i>Towns</i> of United States.	
JEVONS (Professor W. Stanley) on the depreciation of gold 1847-69, see <i>Gold</i> .	
KAFIR RACE, their capabilities under European influence	24
LABOURERS, see <i>Agricultural Labourers</i> .	
LAWES (J. B.). Memoranda, see <i>Agriculture</i> (statistical notes on).	
LEAD, <i>table</i> of quantity produced in United Kingdom, 1857-66	246
LEGOYT (M.), extract from a paper by, on the benefits of a semi-disarmament of the European Powers	368-9
LIFE ASSURANCE. See <i>Assurance</i> .	
LONDON, external sources of wealth which render its existence and growth possible	284-5
LORDS. <i>The House of Lords</i> in 1869 [from the "Daily News"]	223
Number of surviving peerages created in each century since the thirteenth (only three from the thirteenth)	223
Large number of creations during the reign of George III, and especially under Pitt	223
Number of creations by each minister since Earl Grey (123 Liberals to 40 Conservatives)	224
Many of the creations not additions to the peerage, but to a higher from a lower rank	224
LOWE'S (Mr.) proposal for a seigniorage on coining bullion, see <i>Gold</i> .	
MANN (Dr.). <i>Statistical Notes regarding the Colony of Natal</i>	1
State of Natal and its Kafir inhabitants eighty years back.	1
Mode and extent of their powers of numbering	2
Originally ninety small independent tribes in the Natal territory	3
First European connection with it by Lieutenant Farewell in 1823	3
First organisation of Port Natal into a township in 1835	4
Divisions, and their extent in acres, of the colony of Natal	5
Remarkable changes in a short period in the amounts of grants of land to each colonist	5-6
Comparative values of land in the colony	6
Numbers, races, and increase of the population, 1858-68	7-8
State dignitaries, and public expenditure and revenue	8-9
Excess of importations in 1864-65, and their reduction since	10
Great increase of exports since 1852, and their value in 1867-68	11
Values of imports and exports, 1843-67	12
Distribution of the portion of land under cultivation	13
Live stock belonging to settlers and natives	14-15
Mills and manufactories	15
Prices of imports and colonial produce and rates of labour	16-17
Schools: daily attendance and cost	17-19
Prisoners in confinement, white and coloured.	19
Colonial expenditure and public revenue	20-21
Climate, temperature, winds	21-3
Capabilities of the Kafir race under European influence	24
<i>Tables</i> . Land under crops, and exports, 1852-67	25
— value of imports, and prices of imports and colonial produce	26-8
MANN (Horace). <i>On the Cost and Organization of the Civil Service</i>	38
Large increase of the civil service estimates (15 millions in 1868-69) from 3½ millions in 1848	38

MANN (Horace). *Cost and Organization of the Civil Service—contd.*

This increase principally accounted for by the cost of collecting the revenue, expenses of law courts, &c., being now included	39-40
Real increase about 5 millions, or supposing the expenditure defrayed from the same source as in 1848, the apparent increase $2\frac{2}{3}$ millions	40-41
Objects attained by the increase in the estimates	41-7
Increased expenditure on public offices, art galleries, parks, &c	42
Ditto on commissions and new departments	43-4
Ditto on law and justice, merely a transfer from payment by fees	44
Ditto on education, foreign services, and superannuations	45
Ditto on customs, post office, &c., and causes of its increase	46
Summary of the items of increase	46
Conclusion that the increased expenditure has been called for by the public, and that the nation is likely to want a still further development of government machinery	47
Organization of the civil service	48-60
Instance from "Macaulay's History" of injudicious parliamentary attempts at retrenchment	48
The question discussed, confined to the <i>clerical</i> portion of the service	49
Neither in numbers nor remuneration is reduction probable in the other classes of the civil service	49-50
Table of number of clerkships, and average salaries	50
Moderate incomes of the superior civil servants, compared with successful positions in the professions and in commerce	51
Totally opposite state of things (according to Macaulay) in 1691	51
Proposal for saving, by the introduction of an inferior class to do the inferior mechanical work of the offices, which is probably three-fourths of the whole	52-3
Great recent increase of such a class from popular education	53
Select Committees, 1853-60, which have reported in favour of such a scheme	53
Effects of the competitive examination of selected candidates (sons of gentlemen), that they are often too well educated for the situations, and become discontented with their work	54
Necessity of restricting these inferior mechanical clerkships to men of the proper class, and probable large supply of competitors from this class	55
Necessity of one general regulation for all the departments, resort to the open labour market, and adherence to low rates of pay	55-6
Proposed proportions of the superior and auxiliary classes	56
Substitution of a few schemes, and a few scales of remuneration for the numerous ones under existing regulations	57
Advantages and probable gradual amount of saving under the proposed reorganization of the service	58-9

MANURING, see *Agriculture*.

MATRICULATION LISTS. See *University* (Oxford).

MEAT, Australian Company for preservation of 93

MEDICAL STUDENTS. *Medical Students* [a paper by James Paget, F.R.S., in the St. Bartholomew's Hospital Reports] 453

The statistics derived from notes of the careers of students between 1839-59	453
Proportionate numbers in 1,000, who achieved various degrees of success, failed, left the profession, or died	454
Details of the fortunes or pursuits of those who left the profession	454-5
Personal character of greater force in determining career than external helps or hindrances	455

METEOROLOGICAL TABLES (general and special), by James Glaisher :

Dec. quarter, 1868	130-31	June quarter, 1869	344-5
March " 1869	239-40	Sept. "	469-70

MILITARY EXPENDITURE. *Movement for International Economy of Military Expenditure*. [Address at the International Statistical Congress, at the Hague, 1869, by Edwin Chadwick] 456

Three millions of men kept in arms by the European States, at an expenditure of 280 millions sterling annually	456
England's forces simply defensive, and as a police for internal security	456
Economical benefits of the introduction of military and naval exercises into the non-productive school stages of life	456-7
The new arms of precision wielded the more effectually according to the intelligence of the user	457
Arguments for the substitution of popular, for the more expensive standing armies	457
The new arms of precision more available for defence than offence, and their importance to the smaller States	457
Uselessness of all existing armour, and folly of swords against the modern arms of precision	458
Value of employing our armies in civil work and sanitary improvements	458

	PAGE
MINERALS. <i>Mineral Statistics of the United Kingdom.</i> Notice of the annual abstracts to be published in future (as see p. 244, &c.) .	215
ditto, quantity and value of each mineral produced, 1858-67 .	244-46
MONEY ORDERS (Postal), amounts issued in France and England, charges, &c. .	338
MORTALITY of England and Wales, annual rate per cent. in town and country districts (and special town table):	
All quarters, 1866-68 . 128 All quarters, 1867-69 . 342	
,, 1867-69 . 237 ,, ,, . 467	
see <i>Registration.</i>	
average annual rate in eleven divisions of England, 1868 .	{ 127, 236
	{ 341, 466
MORTMAIN, discussion on, at the Congress of 1869 at the Hague .	403, 408
NATAL (PORT), first organization of, into a township in 1835 .	4
NATAL (Colony of). Statistical notes regarding the colony of (see <i>Mann</i>) .	1
climate, temperature, &c. .	21-3
divisions, extent in acres, value of land, number and increase of population, &c. .	5-8
expenditure and revenue, importation, exports, &c. .	{ 8-12,
	{ 20-1,
	{ 26-8
cultivation, stock, manufactures, produce, &c. .	{ 13-17,
	{ 25
schools, prisoners, &c. .	17-19
NETHERLANDS, statistics of the kingdom of (see <i>Brown</i>) .	192
population, territory, &c. .	193-9
army and navy .	199-200
commerce .	200-203
railways, post-office, telegraphs, education .	203-206
finance, national debt, &c. .	208-12
International Statistical Congress held at the Hague (see <i>Brown</i>)	391
NEWMARCH (William), <i>Inaugural Address</i> (as President of the Statistical Society) 16th November, 1869, on the Progress and Present Condition of Statistical Inquiry .	359
Original outline of the objects (divided into classes and sub-divisions) for which the Statistical Society was established .	359
Rules by which the proceedings of the Society have been governed since .	360
Growth of statistics in foreign countries in the last twenty-five years .	361
Classified enumeration of the subjects in the present field of statistical inquiry .	361
Known ultimate units of vital statistics in England and Wales: mortality 22.48, marriage-rate 16.92, and birth-rate 35.34 per 1,000 .	362
Other ultimate units derived from our census inquiries of 1851-61, and the labours of the Poor Law Board .	362
Credit due to Mr. Tooke's inquiries on prices, and their corroboration by a recent report of a French commission .	362
Publications of Dudley Baxter and Esquiros de Parieu, on taxation .	363
Improvements in statistics of life insurance and railways, and in the Board of Trade returns on trade and navigation .	363
— education, cost of government, &c. .	364-5
Summary of fields of statistical research requiring attention .	365-6
Average consumption of articles of food among different classes .	366
Hunt's mineral reports, and Lavergne's works on farming .	367
Wages, income and taxation, &c. (publications of Le Play, Levi, Baxter and Wells) .	367
Instance of the liability to erroneous conclusions from Parliamentary returns relative to the proportion of taxation to wealth in England and Ireland .	367 (note)
Extract from a paper by Mr. Legoyt on the benefits to be derived from a semi-disarmament of the European Powers .	368-9
Returns for comparison of the efficiency of charitable trusts .	369
Sanitary statistics: periodical reports of Mr. Simon .	370
Effects of commercial treaties, and objections to the French treaty of 1860 .	370
Effects in the United States of the suspension of specie payments and high protective tariff .	371

NEWMARCH (William). *Inaugural Address—contd.*

The gold discoveries: prophecies as to their effects given in the "History of Prices" (vol. vi), &c., viz., their non-augmentation of prices, non-depreciation of interest, and their stimulus to trade, proved to be correct	372
— notice of works of Chevalier, Blake, Soetbeer, and Bonnet on the question	372-3
Mathematics and logic of statistics, inquiries of Dr. Guy	373
The rigidly scientific methods of the Registrar-General's Tables, and their avoidance of superfluous details, a model for other statistics	373-4
Dr. Berg's suggestions, from the examination of the Swedish parish registers, of a reassertion of the repressive influence on population of periods of calamity, famine, war or pestilence, in the third succeeding generation, or seventy years after	374-5
Urgent reasons for a complete census of religious sects in the approaching census of 1871	375-6
Notice of the Seventh Session of the International Statistical Congress at the Hague: value of these congresses to the government departments of continental States; reasons for admitting English as one of the official languages; used; subjects yet to be investigated, statistical tests of prosperous or adverse conditions of nations, &c.	377-8
Notice of Thorold Rogers's "History of Agriculture and Prices in England, 1259-1400"	378-80
Notice of David Wells's Reports on the Revenue of the United States	380
Notice of Maurice Block's work "L'Europe Politique et Sociale"	381
Enumeration of old statistical works worthy of republication	382
Arguments in favour of a suitable site and buildings as a central home for societies connected with the social and mixed mathematical sciences	382
Necessity for the introduction of more industrial and economical knowledge into our popular education, and the removal of the evils of non-ventilation, abuse of strong drinks, and excessive army expenditure	383
Claims and impartiality of statistical enterprise	383-4
Appendix. Roll of Presidents of the Statistical Society	385
— prospectus and first report of the Statistical Society	385-90

NEWSPAPERS, three times as many sent by post in France as in England	337
anomalies in charges for transmission of	338
NEW ZEALAND, on the economic progress of (see <i>Hamilton</i>)	293
foundation of the colony in 1840, government, purchase of land, &c.	293
great progress of, 1841-67	294
revenue, expenditure, population, capabilities, &c.	295 6
discussion of the question of the conduct of the Imperial Government towards, and injudicious orders of the Colonial Office, &c. (see <i>Hamilton</i>)	299-304
tables of commercial and agricultural returns, revenue, exports, &c.	305-7
census of 1867. See <i>Census</i> .	

NORTHCOTE (Sir Stafford). *Opening Address as President of Section F (Economic Science and Statistics) of the British Association, at Exeter, August, 1869*

The two great laws of statistics, those of stability and variation	260
Lessons that we learn from the series of disappointments attendant on our statistical inquiries	260
Illustrative example in vital statistics, that infant mortality has not been reduced in the same proportion as the reduction of deaths from small pox by vaccination	261
Benefits from extending statistics to wider fields, as conclusions from different inquiries, even when inconsistent, are suggestive	262
Hypothesis always to be the foundation of statistical work, but to be abandoned at once if found untenable	263
Comparison of the birth, marriage, and death-rates of Devonshire and Lancashire (those of the former less in all instances)	264
Education by the writing-name test better, and criminality less in Devonshire	264-5
General attention of our people towards the avoidance of waste in all its forms, with illustrations from the reduction of crews in the manning of sailing vessels	265-6
Increase in comparative statistics from our colonies	267
The old theory of Government fostering private enterprise by protective laws overthrown by free trade, but Government nevertheless gradually assuming more control over private enterprise	268-9
Too great tendency of the age to invoke the aid of the Government	269-70

	PAGE
OPIUM. <i>Opium in China</i> [from the "Times"]	463
Increased consumption and growth of opium in China, especially in East Mongolia, North Manchuria, and in the south-west province of Yunnan	463
PAGET (James), F.R.S. See <i>Medical Students</i> .	
PALGRAVE (Robert Harry Inglis). <i>On the House Accommodation of England and Wales, with Reference to the Census of 1871</i>	411
Names of authors who have investigated the social condition of the population	411
Deficiency of their reports as to house accommodation	411
The existing information as to house accommodation deficient as to individual families	412
Earlier estimates of Sir W. Petty and Mr. Howlett in 1750 and 1780	412
The law of supply and demand not applicable to the increase of houses, of which, beyond certain limits, there is sometimes an absolute limitation of the supply	413-14
Want of a continued revision and reissue of such a work as Porter's, on the "Progress of the Nation," to fulfil its object, from the rapid changes which occur	414-15
Average number to a house in England at each census, slightly less in 1861, than in 1801, but greater in Middlesex, and London and Westminster	415-16
Increased consumption of wheat per head per annum, during the last sixteen years	417
Information in 1861 census returns: difficulty in obtaining from them the information as to number of families in houses	418
Estimates based on Mr. D. Baxter's method in his work on the national income	418-21
— division of the population into upper, middle, and manual labour classes, according to income, checking this by number of 10 <i>l</i> . houses, and deducting from lower and adding to higher class the body of "attendants," &c., giving a density of population half as much again to the lower as in the upper classes, with only one-fourth the accommodation	419-21
Calculations as to lodgment of families in rural parishes, number of bed-rooms, &c. (from Mr. Frazer's report)	421-2
Influence of bad house accommodation in various neighbourhoods in deteriorating the condition of the inhabitants, shown in tables from Mr. Levi's work on wages, &c.	423-5
Large colonies in London where house accommodation is much worse than it was twenty years ago	425
The progress of this country not uniform, and its social condition marked by alternate periods of welfare and want	426
Good effects of recent prosperity and increase of wages defeated by deficiency of respectable homes	427
Proposal for making the statistical inquiry in the census of 1871	427
PARIEU (ESQUIROS de) on taxation, notice of	363
PARIS. <i>The Budget of the City of Paris</i> [from the "Economist"]	118
Table of ordinary revenue and expenditure: large increase in the charge for debt interest, total cost of improvements, 35,000,000 <i>l</i>	118-21
PARLIAMENT. See <i>Lords</i> (House of); <i>Commons</i> (House of).	
PEERAGES, number of creations. See <i>Lords</i> .	
POOR RATES of the kingdom and the metropolis, 1859-68, and how expended	217
POPULATION STATISTICS. On the classification of the people by occupations, &c. (see <i>Welton</i>)	271
POPULATION, names of authors on the social condition of	411
see <i>Census</i> .	
"PORTER on the Progress of the Nation," want of a continued revision of the work	414-15
POST OFFICE. <i>The English and the French Post Offices</i> [from the "Pall Mall Gazette"]	335
Revenue more an object in the English than in the French post office	335
Total receipts and expenses of the post office in the two countries	336
The continental ocean-going mails gradually passing from English hands	336
Twice as many letters passed through the post in England as in France, but three times as many newspapers and books in France as in England	337
Letters considered the property of the Government in France till delivered, and may be returned to the writer under certain conditions	337
Amounts of money orders issued in the two countries, and liberality of the French in their charges	338
Anomalies in the charges for transmission of newspapers	338

	PAGE
PRICES, see <i>Gold</i> (depreciation of).	
average ratios of, to those of 1849, for the last twenty-two years .	446
conclusion from ditto that there has been a permanent rise of 18 per cent.	447
comparison of, at intervals of ten years, 1789-1869	447
of materials and wages in shipbuilding on the Thames, the Wear, and Clyde in 1869	292
of provisions, average of consols, wheat, meat, &c., with pauperism } and temperature, 1867-69	127, 236, 341, 466
PROPERTY (Real), the pressure of taxation on (see <i>Purdy</i>)	308
statement of the annual value of in England and Wales (145½ millions)	309
<i>tables</i> , &c., of increase of, 1840-68, and growth since 1814	313-15
<i>tables</i> of annual value of, in local divisions	315-16
<i>tables</i> of annual value, 1815 and 1865, &c.	320-24
PURDY (Frederick). <i>The Pressure of Taxation on Real Property</i>	308
Notice of the Lords' report on "burdens affecting real property" of 1846 . .	308
Statement of the annual value of real property in England and Wales (145½ millions)	309
Amount of local taxation, 1867-68	310
Imperial taxation on real property, 1867-68, succession duty, &c.	311
Gross amount of both (local and imperial), on net value 3s. 4½d. in the pound	312
<i>Tables</i> showing increase of assessable property, 1840-68, and different descrip- tions of property assessed, &c.	313-14
Growth of the value of real property, 1814-68, 171 per cent., while increase of population only 96 per cent.	314-15
Gains by enclosures in land under cultivation since 1815, balanced by losses in expansion of towns and the introduction of railways	315
<i>Tables</i> of annual value of real property and of lands in local divisions, with increase per cent. since 1815	315-16
Acreage under cultivation, and rent per acre (1 <i>l.</i> 17 <i>s.</i> 9 <i>d.</i>)	317
Increase of farmers' profits since 1815, 36 per cent.; of trades and profes- sions 212 per cent.	318
Benefits to property of rates for improvements and sanitary measures	319
<i>Tables</i> of annual value of real property and of lands, 1814-15 and 1864-65 . .	320-23
— gross annual value of real property under Schedules A and D	324
RAILWAY COMPANIES, improvement in their condition during 1868	95
RAILWAYS, prices and traffic :	
Jan.-Dec., 1868 149 Jan.-June, 1869	356
Jan.-March, 1869 255 Jan.-Sept., ,,	481
RAILWAYS. <i>Railway Casualties in 1868</i> [from the "Pall Mall Gazette"]	332
<i>Table</i> of killed and injured in 1868, compared with 1867	332
Fatality of level crossings to children	333
Proportion of annual deaths from train accidents 1 to eight million pas- sengers, and injuries 1 to every 356,000	333
RAILWAYS. <i>The Railways of America</i> [from the "New York Times"]	231
Miles in operation, cost, and tonnage carried, 1869, commencement of their construction on a grand scale in 1848, and annual increase since (5,000 miles opened in 1869)	231
Still greater increase in the tonnage traffic (1,300 per cent. per annum) . . .	232
Tonnage per mile and earnings of the railways	232
<i>Table</i> of cost per train: mileage of running trains in New York and Great Britain, showing cost of the former to be 2½ times the latter	233
REGISTRAR-GENERAL'S TABLES, a model for other statistics	373-4
REGISTRATION of marriages, births, and deaths, (serial tables) :	
Quar. Sept.-Dec., 1868 125 Quar. March-June, 1869	339
„ Dec.-Mar., 1868-69 234 „ June-Sept., ,,	464
<i>tables</i> of divisions	{ 129, 238 343, 468

REGISTRATION—*contd.*

annual rate per cent., 1862-69	{ 126, 235, 340
special <i>table</i> of fourteen large towns	{ 128, 237 342, 467
ditto, Scotland, (serial, average, bastardy, and divisional tables):	
Quarter, Dec., 1868 . 132-4 Quarter, June, 1869 . 346-8	
„ Mar., 1869 . 241-3 „ Sept., „ . 471-3	
summary of Great Britain and Ireland:	
Quar. Sept.-Dec., 1868 . 134 Quar. March-June, 1869 . 348	
„ Dec.-Mar., 1868-69 . 243 „ June-Sept., „ . 473	
see <i>Mortality</i> .	
births, marriages, and death-rates less in Devonshire than in Lancashire	264
RETRENCHMENT, instances from Macaulay's history of injudicious parliamentary attempts at	48
REVENUE, net produce of, and application, &c., in years and quarters ending:	
Dec., 1865-68 . 147-8 June, 1866-69 . 354-5	
March, 1866-69 . 253-4 Sept., „ . 479-80	
“ROGERS (Thorold) History of Agriculture and Prices,” notice of	380
SALT, <i>table</i> of quantity produced in Cheshire, 1859-68	246
SANITARY STATISTICS, periodical reports of Mr. Simon	370
SCHOOLS, on teaching science in, see <i>Science</i> (Physical).	
SCHOOLS. <i>Church Schools in England and Wales</i> , 1867	226
Statistical report of the National Society on the numerical state of Church schools	226
Parishes supplied by schools of adjoining parishes; distances walked by pupils; cottage schools, week-day schools, night schools; teachers' income, &c.	227
SCIENCE (PHYSICAL). <i>On the Method of Teaching Physical Science in Schools</i> [by the Rev. W. Tuckwell]	325
Subjects to be taught, time spent on them, books necessary, teaching power, and results	325-9
SCIENCE AND ART DEPARTMENT. See <i>Examinations</i> .	
SEWAGE, utilisation of, &c.	93
SHEEP, large increase and number of, in United Kingdom in 1868	68
SHIPBUILDING, on the decline of, on the Thames (see <i>Glover</i>)	288
its decline on the Thames, not attributable to inferiority of skill, want of capital, nor higher cost of materials, nor price of coal, but to cost of labour, and disuse of wood in shipbuilding	288-91
SHIPPING (British), vessels and tonnage.	
foreign trade, United Kingdom:	
Jan.-Dec., 1865-68 . 145 Jan.-June, 1866-69 . 352	
Jan.-March, 1866-69 . 251 Jan.-Sept., „ . 477	
SHIPPING. <i>The Tyne: Progress of Shipping Entries</i> , 1854-68	459
Number of vessels, tonnage, and average size, showing increase on each point	460
Comparison of clearances outwards of our chief river ports, and from the Tyne, 1861-68	460
SHIPWRECKS:	
<i>tables</i> of number of	(omitted)
SILVER, increased exports of, to the East, from Abyssinian War, and amounts, 1861-68	84-5

	PAGE
SOCIAL CONDITION. See <i>Population</i> .	
SOCIETIES, arguments for a central home for those connected with the social and mixed mathematical sciences	382
STATISTICAL CONGRESS. See <i>Congress</i> .	
STATISTICAL INQUIRY, progress and present condition of (see <i>New-march</i>)	359
STATISTICAL SOCIETY (The).	
original outline of its objects, rules of its proceedings, &c.	359-60
roll of presidents	385
prospectus and first report	385-90
anniversary meeting and report—thirty-fifth, March, 1869	153
list of papers read, 1868-69	154
abstract of receipts and payments for 1868	157
proceedings, ordinary meetings, first to eighth, 1868-69	(omitted)
inaugural address of president, November, 1869 (see <i>Newmarch</i>).	359
STATISTICS, the two great laws of, stability and variation	260
enumeration of old works on, worthy of republication	382
(International), proposition for carrying out a complete system of	402
SUGAR (BEET ROOT), success which would attend its manufacture in England and Ireland	76-7
TAXATION, its proportion to wealth, liability to error in parliamentary returns on	367
the pressure of, on real property (see <i>Purdy</i>)	308
(local) amount of, 1867-68	310
TAXATION. <i>Local Taxation in England and Wales</i>	216
Total amounts in 1868, and special details, rate per pound	216
Poor rates of the kingdom and the metropolis, 1859-68, and how expended	217
Local taxation on real property in England and Wales, arranged in counties, with rates in the pound	218-19
Ditto in the metropolis, arranged in unions and parishes, with rate in the pound, and per head of population	220-21
TEA CULTIVATION in British India, its rise, progress, and prospects (see <i>Fielder</i>)	29
TEA PLANT, its discovery in Assam in 1823, &c.	29
expenses, outlay, and produce of its cultivation	33-5
TEXTILE FABRICS, <i>table</i> of exports of, 1855-68	437
THOMAS (John), of Pradannack, see <i>Agriculture</i> (changes in Cornwall).	
TIN:	
<i>table</i> of quantity and value produced in Cornwall and Devon, 1858-67	245
TOOKE's inquiries on prices, recent corroboration of, in the report of a French commission	362
TOWNS (SMALL), probability of their falling into decay from railways rendering fewer local centres necessary for our rural population	273
TOWNS. <i>Management of Towns in the United States</i> [by Dr. Jarvis, of Dorchester, Massachusetts]	461
All local administration determined in public assemblies, regulations adopted for the meetings, qualifications of voters; duties of the select men, &c.	461-2
TRADE of United Kingdom, exports and imports, 1866-69	{ 142, 247 349, 474
see <i>Exports, Imports</i> .	
TRADES' UNIONS. The decline of the shipbuilding trade on the Thames, partly due to the control of the masters by	291
TREATIES (COMMERCIAL) effects of	370
TUCKWELL (W.). See <i>Science</i> (Physical).	
TYNE (the River). Shipping entries, see <i>Shipping</i> .	

	PAGE
UNITED STATES. See <i>America</i> .	
UNIVERSITY (Oxford). <i>Matriculation and Honour Lists, 1832-68</i> [from "Macmillan's Magazine"]	459
Average number of classmen compared with matriculation four years earlier	459
Average decline or rise in the history, mathematical, natural science, and "literæ humaniores" schools	459
VACCINATION. Infant mortality not reduced in the same proportion as deaths from small pox by vaccination	261
VITAL STATISTICS, known ultimate units of, derived from our census inquiries, &c.	362
VOTERS. See <i>Elections</i> .	
WAGES, prices of in shipbuilding on the Thames, Wear, and Clyde in 1869	292
income, &c., notice of publications on	367
WEATHER, see <i>Meteorological tables</i> .	
WEIGHTS and MEASURES. Proposals at the Congress at the Hague, 1869, for an international system	408-9
WELLS (David), Reports on the revenue of the United States, notice of	380
WELTON (T. A.). <i>On the Classification of the People by Occupations, and on Other Subjects connected with Population Statistics of England</i>	271
An illustration from the natural course of rivers, of the natural growths of occupations, towns, &c., from the necessity of providing for human wants, safety, &c.	271-2
Probability of many small towns falling into decay from railway com- munication rendering fewer local centres necessary for our rural popu- lation	273
Rules to be used in fixing the limits of a town	273-4
Division of the population of towns into primary and secondary classes of occupation	274-5
Objections to the tables on occupations, and review of the classification by employments, in the Census Report of 1861	275-82
— doubtful propriety of the use of the word "product," and of its being considered a new product only on its changing hands	276-8
— ambiguities in the arrangement of classes of producers, and omission of that of retail traders	278-9
— relative number of domestic servants and of innkeepers and servants	280
— comparative statement of the author's and the census classification	281-2
Summary of the author's general principles of classification	282-4
— external sources of wealth which render the existence and growth of so enormous a city as London possible	284-5
Suggestions as to the forthcoming census	285-7
— that the collective ages of foreigners, Irish, &c., in each county be taken, for estimating the migration into and from the county in each decennial period	285
— rectification of area of parishes; separate returns of houses of only two or three rooms; of children working in agricultural gangs; and of sex and age in a census of religions	286
— suggestions relative to education, and to deaths in hospitals	286-7
WHEAT. See <i>Harvest</i> .	
experiments on the growth of	439-41
wide extent of the region suited to its cultivation	65-7
its culture more affected by soil than by variation of price	69
quantity and value of home produce and imports, 1862-68.	82
average price of, 1863-68	81
comparative wholesale prices in London, 1857-64-67-68	83
increased consumption of, per head, during the last sixteen years	417
estimated consumption per head per annum, and our dependence on foreign supply	65
WHEAT CROP of 1867, estimate and result, foreign supply, &c.	61-2
of 1868, increased yield over 1867, price, foreign imports	63-4
of 1868 finest since 1825	80

	PAGE
WIVES. <i>Poor Men's Wives</i> [from the "Pall Mall Gazette"] . . .	115
Evidence before Mr. Lefevre's committee, as to the hard lot of wives among the poor, and as to their being in general more thrifty than their husbands, &c.	115-17
ZINC:	
<i>table</i> , of quantity and value of the produce of the United Kingdom, 1858-67	246
ZUYDER ZEE, scheme of the Netherlands Crédit Foncier for draining and cultivating	213
	(note)

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